

The

# Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

JANUARY 8, 1959

NUMBER 6

## INVENTIONS AND CONTRIBUTIONS BOARD

memorandum from Dr. James A. Glennan, NASA Administrator, dated December 5, 1958, in which a decision was made of a Board of Inventions and Contributions. The memorandum (in part) as follows:

In accordance with the National Aeronautics and Space Act of 1958, I have established a Board of Inventions and Contributions. The Board's functions consist of:

- evaluating and recommending to the Administrator for award, if any, any scientific or technical contribution which may have significant bearing on the conduct of aeronautical or space activities;
- and (b) recommending to the Administrator to be taken on proposals for title to inventions.

Dr. James A. Hootman has been assigned to serve as Secretary of the Board in addition to his other duties, and those concerned with patent matters. All patent matters are being handled by the General Counsel.

KEITH GLENNAN  
ADMINISTRATOR

## "SICK LEAVE PAY" CLAIMS CAN BE REOPENED FOR TAX REFUND

A letter recently received from NASA Headquarters announces that paragraph 98 of the Technical Tax Amendment Act of 1958 provides for a period of one year for reopening previously disallowed refund claims based on "sick-leave pay".

This act was passed to enable those taxpayers whose exemptions for sick pay had been disallowed by the Internal Revenue Service to make new refund claims after the Supreme Court had ruled that sick pay received under employer plans, which includes sick-leave pay received by Federal employees, is exempt from the Federal Income Tax.

Any taxpayer who filed a claim for refund for sick-leave pay for the tax years 1951, 1952, 1953, and whose claim was disallowed as evidenced by a registered notice or whose claim was not acted upon, may send a letter to his District Director of Internal Revenue requesting reconsideration. Requests should be made as soon as possible, but in no event later than September 1, 1959.

(Continued on Page 2)

## New Courses, Lectures Offered

A new lecture series entitled "Mechanical Behavior of Materials at Elevated Temperatures" will be offered by the University of California on Monday nights from 7 to 10, beginning February 2, 1959. A non-credit presentation, the series will continue through June 1, and will be held in the Life Sciences Building of the Berkeley Campus. Lecturers will include professors from the University as well as research scientists and engineers from industry. Registration fee is \$40.

San Jose State College is offering a course in the field of random vibrations. Also a non-credit course, meetings will be held each Tuesday evening 7:00 to 10:00 beginning February 17 and ending on June 4. The course is designed to provide the graduate engineer with a basic introduction to the field of random vibrations. Fee for the course is \$25.50. Mr. Ray E. Bieber, Research Engineer at Lockheed, will instruct.

During the winter quarter at Stanford, Professor Baudouin Fraeijs de Veubeke will give a course on aeroelasticity. Professor Fraeijs, one of the two outstanding experts on aeronautical engineering in Belgium, is spending three months at Stanford as part of the Exchange Program of the Advisory Group for Aeronautical Research and Development of NATO. The course will be offered Mondays, Wednesdays and Fridays from 4:00 to 5:00 P.M.

Further information regarding any of the above courses may be obtained from your Training Officer, John Leveen, extension 260.

## VAN ZANDT VISITS AMES

The Honorable James E. Van Zandt, Congressman from Pennsylvania, registers for a visit at Ames on Tuesday, December 30. His party included Cdr. E. J. Bauser (center) and Lt. C. De Armond, (right).





## Paul Laviano Retires



Having reached the comfortable age of retirement and the completion of over 15 years of service, Paul Laviano is retiring from his position as a metal fabricator at Ames this month. Actually, Paul has been enjoying leave since the 19th of December. At a special presentation at the Structural Fabrication Branch made on Paul's last day, he was presented with a Shakespeare Rod and Spinning Reel by members of the branch. Paul plans spending most of his time hunting and fishing in the Sierra's. Steve Oliver, Branch Chief, (on left in photo), said he regretted to see him leave but wished him every happiness.

## It's News To Us!

### WHAT'S HAPPENING AT AVIATION SHEET METAL

It would take a full edition of the Astrogram to begin to describe in detail the ingenious devices turned out as routine work by the men in the Aviation Sheet Metal Shop. The name falls short of describing all the work that goes on in the north wing of the big hangar. Included in the shop are such activities as forging, casting, electroforming, electroplating, anodizing, metal spraying, heat treating, painting, and numerous other crafts applicable to the research programs at Ames. Many of these will be discussed in future Astrogram articles.

One craft not mentioned above is the ASM rubber working facilities. Problems relating to inflatable rubber seals of varied cross sections and round sections from 1/8" to 4 1/2" diameter are frequent at Ames and ASM determined to make the solving of these problems its special province.

With the development of special equipment, permanent vulcanized joints have supplanted the old glued joints of the past. Repairs are effected without removing seals from their places, saving much installation time. Special shapes and sizes are routine to meet demands of the designer. "O" rings in quantities are supplied in special sizes without the cost of elaborate dies and replacements are available with-

(Continued from Page 1)

The Supreme Court Decision and the new tax act will aid those taxpayers who made a refund claim within three years of filing their 1951, 1952, and 1953 tax returns, since the tax law was amended in 1954 to make all leave pay exempt from taxation.

### SPACE TECHNOLOGY LECTURES SCHEDULED FOR KQED TV

The University of California and TV station KQED will present a film series of 17 lectures on "Space Technology" each Sunday beginning January 11, 1959, from 4 to 6:30 P.M.

out the expense of special order procedures. The end result of the Aviation Sheet Metal Branch rubber working facilities is less restrictions on design engineers, lower maintenance costs, less tunnel down time and elimination of procurement problems.

Equipment used is ASM designed and built of available salvage metals. Such a device is "main press", a basic rubber vulcanizing machine which in effect a hydraulic press employing electrically heated platens. Press and platens were home made; hydraulic power is from old aircraft hand pumps and hydraulic cylinders. The cost of \$65 is negligible compared with the high costs of commercially available machines.

In the past years there have been many incentive awards made to ASM people for their efforts. The largest award received in that branch was made to Ralph Korngold, Al Ercolini, and William Hill for development of a tail pipe probe. Probes in the past usually had to be replaced after each flight, having burned out from the intense heat of the exhaust. These men developed a special cooling design that allowed the same probe to be used for numerous flights without any trouble. Solving this problem saved the government considerable money and also rewarded the men for their efforts.

ASM, along with the many activities mentioned also does routine structural repairs and modifications on our own aircraft. But that is to be expected--this is the sheet metal shop!



## Ames Flying Club Invites New Members

The Ames Flying Club has announced its intention to increase membership from nine to twenty and purchase a second airplane. For the past year and a half, the group has been flying a Cessna 120. Prior to that time, the club plane was a Piper Cub. The group was formed in April of 1956 and is comprised partly of members who had pilots ratings and partly of those who learned to fly after joining.

The Cessna 120, although a good training plane, is somewhat limited for cross country flying. Acquisition of the additional plane, the Cessna 170, is expected to provide good availability at low cost for both local flights and extended trips. Acquisition of the 170, of course, is dependent on club growth. Although some people have already expressed a desire to join the expanded group, several vacancies still exist. Interested personnel can obtain further information from either Walt McNeil or Dick Bray at extension 206. In order to give interested parties an opportunity to see both planes, plans have been made to display them at Ames flight line during the lunch hour on Monday, January 12th, weather permitting.

"CHRISTMAS CARDS"  
TO CARE!

The 12-foot Pressure Wind Tunnel Branch, as in previous years, chose again this past Christmas to donate the amount usually spent on sending Christmas cards among members of the branch to CARE. The suggestion was unanimously agreed to and \$60 was contributed by members and a check in that amount forwarded to CARE!

### FILM CLASSICS TO START

The Film Classics Club will begin its season on January 16, 8 P.M. The program will consist of a short "Wedlock" and "The Caine Mutiny" in Technicolor. Tickets are available from the seller in your section. No single admission tickets will be sold for this series.



Joe Douvillier, left, and Dick Bray, both of Flight Research, admire the Ames Flying Club's Cessna 120 and the prospective new addition to the Club, the Cessna 170. Acquisition of the new plane is contingent upon adding new members to the Club.

## Code of Ethics for Government Employees

ANY PERSON IN GOVERNMENT SERVICE SHOULD:

Put loyalty to the highest moral principles and to country above loyalty to persons, party, or Government department.

UPHOLD the Constitution, laws and legal regulations of the United States and all governments therein and never be a party to their violation.

PERFORM a full day's labor for a full day's pay; giving to the performance of his duties his earnest effort and best thought.

SEEK to find and employ more efficient and economical ways of getting tasks accomplished.

NEVER discriminate unfairly by the dispensing of special favors or privileges to anyone, whether for remuneration or not; and never accept, for himself or his family, favors or benefits under circumstances which might be construed by reasonable persons as influencing the performance of his governmental duties.

MAKE no private promises of any kind binding upon the duties of office, since a Government employee has no private work which can be binding on public duty.

ENGAGE in no business with the Government, either directly or indirectly, which is inconsistent with the conscientious performance of his governmental duties.

NEVER use any information coming to him confidentially in the performance of governmental duties as a means for making private profit.

OPPOSE corruption wherever discovered.

UPHOLD these principles, ever conscious that public office is a public trust.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif. is published bi-weekly in the interest of Ames employees. Send contributions to the Editor, Personnel Branch, Phone 385. Deadline: Thursday between publications. Editor: B. P. Wilson. Reporters: NASA employees

### GLEASON JOINS NASA

James P. Gleason, former Administrative Assistant to Senator William F. Knowland, has been appointed Assistant Administrator for Congressional Relations of the National Aeronautics and Space Administration, effective December 16, 1958. Dr. T. Keith Glennan, NASA Administrator, has announced.



## Ames Closeups



HELEN KELTON

Helen Kelton was happy to accept a position at Ames two years ago as a Math Aid with EMC, especially when she discovered that office had a northern exposure -- a northern exposure overlooking the landing field! Helen has an unquenchable interest in flying.

Born in San Francisco, she attended Marin Junior College and the University of California. As a girl she developed an interest in flying, and won third prize in an airplane model contest in San Francisco when she was eight. Just prior to World War II, the Civilian Pilot Training program was begun. Women were limited to 1 per cent of the total number to be trained. Helen became one of the 1 per cent.

Following completion of the training program, which was held at Mills College, Helen accepted a position in an office at the Oakland airport. Her reason for accepting this job was the opportunity it afforded her to fly on her lunch hour. In those days, she says, she just liked to go up and do acrobatics. Now, when she flies, she feels she has to "go someplace".

During the war she married her college beau, who was (naturally) a pilot in the Air Force and is now a successful public accountant, following several years with the Bureau of Internal Revenue. A few years ensued where flying took a back seat to raising four children, three boys and one girl. As soon as the youngest entered school, Helen returned to work and in 1956 applied at Ames. Now

## Christmas Party Success!

Nearly 2000 Ames employees and their children attended the Christmas Party sponsored by the Ames Entertainment Committee Saturday, December 20. Santa Claus distributed 1190 gifts to the kiddies. The Committee has requested a special vote of thanks be given to Harry Stefani, of the Machine Shop, who made arrangements for the excellent entertainment provided by the Fredrick and Asella Dance Studio of Santa Clara and the young acrobats, Manny and Priscilla. Also their appreciation for the wonderful job done by Santa Claus (David West), Tinker Bell, (Carolyn Hoskey), Darryll Stroud and Harry DeVoto and his group for their puppet show, and to all the others who participated in the affair.

Santa and Tinker deserve credit for their ability to cope with the variety of questions with which they were bombarded throughout the day. One 4 year old asked why Tinker wasn't flying about. And Santa was told by an eight year old when he had asked what she wanted for Christmas that she had already given her order to a man at Sear's. Such queries and retorts notwithstanding, the party was termed "very well received".

living in San Mateo, she doesn't fly during lunch hours, but she is a member of the San Mateo Flying Club and occasionally makes cross country flights to various parts of California.

In 1956 and 1957, Helen was in charge of inspections at the Powder Puff Derbies. She is a member of the "99's", a licensed women's pilot organization started by Amelia Earhart.

The Keltons love to camp and fish everywhere in western U. S., but particularly in the Sierras. To date, they haven't combined their favorite hobbies and flown into a remote area for a camping expedition.

The children? Oh, yes, they love to fly, too. However, lately they haven't flown much--the planes aren't quite large enough to accomodate a full family of six!

## IS IT A BIRD? IS IT SANTA CLAUS?

James L. Eddy, of the Aviation Sheet Metal Branch, paid little attention to the light tread of footsteps on his roof on Christmas eve--that would be Santa Claus. However, when a tall bird walked in carrying a little bundle of joy, Eddy became alert. The bundle, a little blue-eyed, black haired girl, weighed 7 pounds and 11 ounces and measured 20 inches. Name--Karen Lea.

There was no doubt in Rick Cross' mind when the stork trooped into his home at 11:37 on December 31. Cross, also of Aviation Sheet Metal, welcomed his last minute deduction with open arms--a girl weighing 5 pounds and 11 ounces.

Les Briggs and Brad Wills, both of Personnel, were thwarted in their desires for 1958 deduction. Both arrivals, due momentarily, may have arrived as this edition went to press.

## Want Ads

For Sale--6 1/2" Dormeyer portable saw, \$17.50. M. Resnick, ext. 208.

Wanted--Ride from Bollinger Blaney, Cupertino area. J. P. man, ext. 226.

Wanted--One or two persons to join car pool. Vicinity of Grady Road and Fremont, Los Altos. Call Ray Savin, ext. 216, or John McDevitt, ext. 317.

Apartment for rent--2 room furnished. Kitchen and large living room with chesterfield wall bed. Garbage and water paid. \$65 month. Contact M. Bond, 57 S. 19th, San Jose.

House for rent--3 bdrm. Two minutes from Moffett. Has water softener, large back yard, wall to wall carpeting and venetian blinds. Rent for \$110 or will consider leasing. Phone ext. 208 and ask for C. After 5, call Chestnut 5-2731.

For sale--2 rolls of Super Anschrome, daylight. Factory loaded, 20 exposure, 35 mm rolls, dated 4/59. \$1.60 each. M. Kussoy, ext. 327, LDHT.



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VOL. I

JANUARY 22, 1959

NUMBER 7

## McDonnell Aircraft Proposal Selected for Manned Space Capsule

The National Aeronautics and Space Administration has selected McDonnell Aircraft Corporation as the source for the design, development, and construction of a space capsule capable of carrying a man to orbital flight around the earth. The negotiations for a formal contract with McDonnell will open immediately.

Named "Project Mercury", the manned satellite program is under the management and technical direction of NASA with the advice and assistance of the Defense Department's Advanced Research Projects Agency. The space capsule, serving as the payload of a powerful booster will be designed to carry a human passenger through the atmosphere, into orbital flight, and safely back to earth again. The satellite system will provide a means of studying the psychological and physiological effects of space flight on man. The research will include man's reaction to weightlessness during orbital flight, high acceleration during launch, and high deceleration during reentry into the atmosphere.

The design of the capsule will be of the non-lifting type with an extremely blunt leading face covered with a heat shield. A couch will safely support the pilot during acceleration. The pilot will have the option of manual or automatic control during orbital flight, with retro-rockets, initiated either by himself or from the ground, to be used for reentry as the capsule reenters the atmosphere and slows to a speed approximately that of sound, a large parachute will open to stabilize the vehicle and radar beacon will be released to pinpoint the capsule's location. When the velocity of the capsule decreases at a predetermined rate, a landing parachute opens, permitting safe landing on land or water.

Twelve companies submitted proposals in the NASA competition for the space capsule. McDonnell's proposal was selected, said T. Keith Glennan, NASA Administrator, after a careful assessment of the technical value of the proposals, and of the facilities, experience, and other qualifications of the various companies. The total cost of the satellite capsule and its subsystems is expected to exceed \$15

million.

The NASA initiated the competition about three weeks after the agency was given the management responsibility of US non-military space research projects on October 1, by President Eisenhower.

The acceptance of the proposal for Project Mercury comes slightly less than a month after the acceptance of the Rocketdyne proposal for design and development of a rocket engine in the one to one and one-half million pound thrust class. Both projects are scheduled to continue for several years.

## Dr. Dean Chapman Elected Fellow I.A.S.

Dr. Dean Chapman, of the Fluid Mechanics Branch, will become a Fellow of the Institute of Aeronautical Sciences at the annual meeting to be held in New York City from January 26 to 29. Announcement of the Fellowship will take place at the Honors Night Dinner, Tuesday evening, January 27, at the Grand Ballroom of the Astor Hotel.

Guest of Honor and principal speaker for the dinner will be Dr. T. Keith Glennan, Administrator of NASA.

This year's meeting--a Symposium on Aero/Space Technology--will include the presentation of a number of technical papers, two by Ames scientists. C. C. Pappas, of the Low Density and Heat Transfer Branch, will offer "Effective Injection of Foreign Gases on the Skin Friction and Heat Transfer of the Turbulent Boundary Layer." Howard K. Larson, of the Fluid Mechanics Branch, will present a paper on "Heat Transfer and Separated Flows."

## Guggenheim Fellowships Announced

Announcement has been received at Ames of the approaching deadline for filing an application for the Daniel and Florence Guggenheim Fellowships awarded annually for graduate study at three major centers of research and development in rockets, astronautics and flight structures.

The fellowships are open to qualified science or engineering students who are prepared for graduate study and show promise of exceptional ability. Candidates

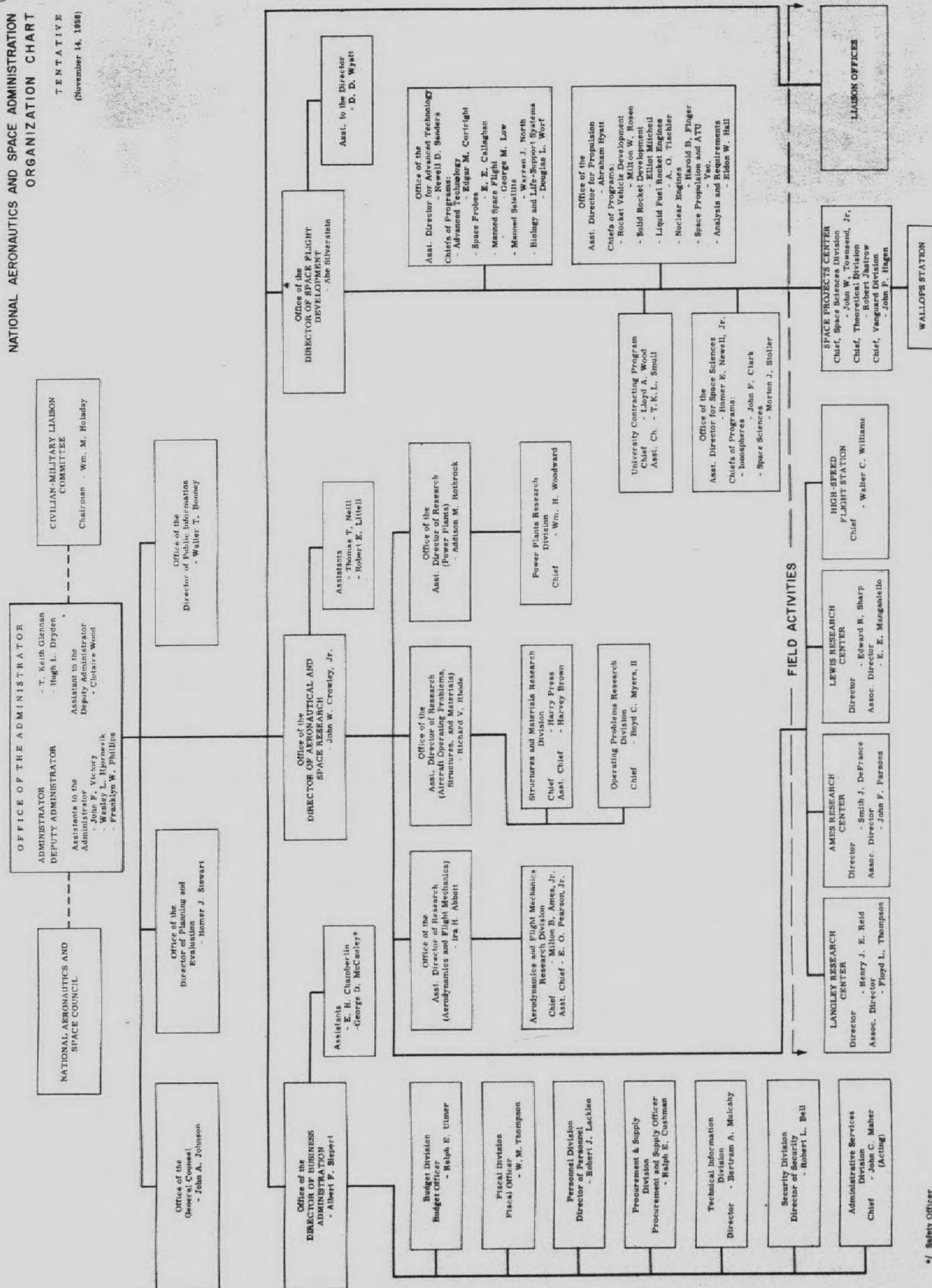
should preferably be under 30 years of age.

Applicants who wish to be considered for Jet Propulsion Fellowships should apply directly to either Princeton University or California Institute of Technology. Applications for Fellowships in Flight Structures should be made to Columbia University. Deadline for filing is March 1. Interested parties may contact the Personnel Office for further information.



# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ORGANIZATION CHART

TENTATIVE  
(November 14, 1958)



At the request of many Ames employees, the Astrogram is publishing the above organizational chart of the NASA. We remind those who ask, "Where's the Jet Propulsion Laboratory?" that the precise relationship of JPL to NASA is that of a contractor, although the majority of its facilities will become the property of NASA.



## Ames Closeups



RAY ADDISON

In the Hall of Fame in Washington, D.C., is a bust, about sixteenth larger than life size, of Thomas Moran, one of the early American painters. In bronze, it is the work of Ray Addison, of our Mechanical Instrument Branch.

Like so many of our employees here at Ames, Ray is a man of many talents and interests. He came to Ames from a plastics manufacturing firm in San Jose seven years ago. Originally from Elsie, Michigan, Ray studied engraving before joining military service for World War I. He still engraves all trophies here at Ames. Following the war, he attended art school at the Broadmoor Art Institute in Colorado Springs and studied sculpture at the California School of Fine Arts.

After four years of schooling, he came to San Francisco and became engaged in architectural modeling. Many San Francisco buildings are still ornamented with products of Ray's artistic talents.

Later, Ray joined the US Park Service and for four years was in the Museum Division preparing a series of dioramas and displays for the entire area west of Mississippi. He also created all bronze figures of animals and the busts of Thomas Moran. Two of the latter were made; one in a museum at Scotts Bluff, Nebraska.

Now Ray lives in San Jose with his wife and two daughters. He is a charter member of the San Jose

## Want Ads

For Sale--1958 17 foot V8 Chris Craft inboard. This boat is my personal demonstrator. Call ext. 291, Reid-Selth. After 5, Andrew 9-1477.

For Sale--1947 Dodge Sedan. Runs well, \$50. Call Cooper, ext. 210.

For Sale--Chrome Dinette Set, gray formica table, 4 yellow chairs, \$20. Call AX 6-8611.

Lapidary Society, which brings us around to his interesting hobby. Ray carves cameos, making true likenesses of his subjects. He does this solely for his own enjoyment and does not sell his products. His cameos have been exhibited all over the west from Seattle to Los Angeles. Among those displayed have been likenesses of Anne Morrow Lindbergh, Katherine Cornell as Juliette, and Helen Gahagan Douglas.

Currently, Ray is carving a brooch of his wife and two daughters. Oval in shape, it will measure about two and three-eighths inches long. The time involved in creating a cameo of this type runs from 80 to 200 hours, depending on the subject. Completely hand engraved on stone imported from Madagascar, Ray uses no photographic processes in carving the cameo, but works from several photos of the subject. The cameos are a soft white on a dark coffee background and he can depict blond, grey or brunette hair on the subject.

Ray has lectured before societies on the art of making jewelry, has written a number of articles for magazines, and has had the honor of having several pieces of his work on covers of magazines.

In the Mechanical Instrument Branch here at Ames, he has designed and built cameras for use in tunnel work, among many other interesting, and mostly classified, assignments.

The caricature at the top of the column? That was done by Wolo, well known caricature artist, in San Francisco several years ago. Ray says he likes it better than photos, "--shows more detail". That's probably the same reason he started putting people on cameos.

## AMES ENTERTAINMENT COMMITTEE SEEKS ADVICE FOR NEW DANCE

The Astrogram received a notice from the Ames Entertainment Committee this week which reads as follows:

As those who have attended our social affairs know, our activities are getting bigger and better all the time--such as our Gay Nineties, the Bar-B-Que, the Big Stampede Dance, and, of course, the Christmas Party for the children. We want to thank the people who come and take part in the activities, making them a success. Also, our thanks for the wonderful cooperation of the people in the various branches who gave their time and energies to make the programs possible.

We're having a dance in April and want to make it the greatest Ames dance yet. To do this, we have to please the majority. So, we are asking everyone to please drop us a line and tell us what kind of a dance theme you would like--dinner dance, western? Should it be on the field or off? Live music or records? Send your preferences to the Ames Entertainment Committee, c/o Bob George, 14-foot TWT, and we will try to fill them.

## AMES ENTERTAINMENT COMMITTEE

## ELEANOR HOLT PROVIDES FOR FIRE TRAGEDY VICTIMS

Eleanor Holt, of Fiscal, and her husband, Jack, welcomed unexpected guests at the Christmas season. A flash fire completely destroyed Mr. Holt's business partner's home leaving them with nothing more than the night clothes they were wearing. The family of seven children, mother, and father were uninjured. Eleanor and Jack provided them with food, shelter, and clothing and turned what would have been a bleak period into a happier holiday season.

## BLOOD BANK DUE HERE JANUARY 29

The next visit of the Santa Clara Valley Blood Center mobile unit to Ames is scheduled for January 29. Those wishing to sign up to donate blood may do so in their respective branch offices.



## BASKETBALL

AMES CAGERS WIN STREAK  
BROKEN BY VARIAN

The Ames Basketball Team really got off the ground in a big win over the Sylvania Microwaves. Scoring at ease and from every angle, NASA was never headed during the four quarters of Mountain View Industrial League play. Mauri Rasmussen, SSFF, tanked 21 points to lead his mates in the scoring. Willie White, Adm. Services, Dick Peterson and John Arvesen, both of 10x14, getting 9, 8 and 7 respectively, helped to round out a whopping 55 to 22 victory.

Ames cagers followed up with a rousing come-from-behind win to wrest second place from the flashy Eddy's Sport Shop quint. Trailing two to four points off the pace for three quarters, the NASA five found the combination and moved into a five point lead with one minute to play. The Sport Shop then capitalized on a premature let-up to tie the game at the final gun. However, a field goal and foul shot scored in the three minute overtime put the NASA on top to win the game 40 to 39. Willie White turned in his best game, hitting for 17 points and playing the tiger on defense.

An unusually strong defense set up by the Varian cagers and luckless shooting by the NASA dropped the Ames quint out of

## MOODY APPOINTED GRAND HERALD

Donald P. Moody, of the Mechanical Instrument Branch, will be appointed Grand Herald of the California Lodge of the Independent Order of Odd Fellows at a formal reception on Saturday, February 7, 1959.

The reception will be held at the Sunnyvale High School, preceded by a dinner at the Morse Avenue School in Sunnyvale. The public is invited to attend.

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Reporters: NASA employees

their shortlived sole ownership of second place. It was Ames first loss since the season opener. NASA now holds the precarious No. 3 spot in League play with a 3 win - 2 loss record. The half time scoreboard in the Mountain View High School Gym proclaimed the caliber of play as it read: Varian 11, NASA 7! The issue grew darker as each NASA attempt to spark a drive sputtered and failed. The final gun found Varian on the long end of the 41 to 27 score.

## ATOMIC & NUCLEAR PHYSICS COURSE ON

The University Extension of the University of California is offering the second television correspondence course coordinated with the NBC-TV series Atomic Age Physics, "Continental Classroom", scheduled February 11 through June 5. The material presented in the second 80 telecasts, Atomic Nuclear Physics, X 349, will be divided into 15 study assignments to be completed and submitted to the University Extension for correction and instructor comment. Students who wish to earn the 3 university credit for their work must take a final examination at a time and place designated by the University Extension.

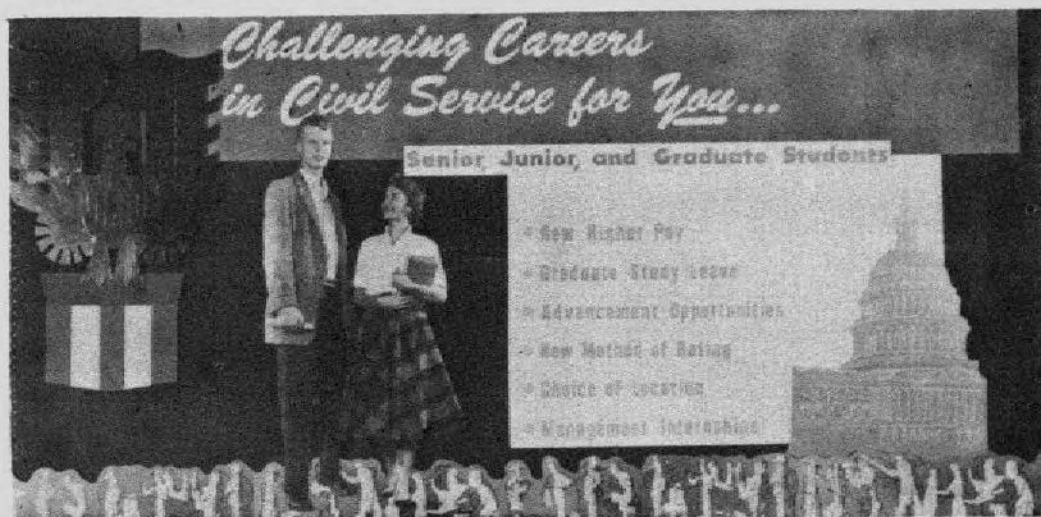
The fee for enrollment with the course is \$25. Viewers not wishing to prepare written assignments for the course but who want to follow the telecasts with a study guide may purchase the course syllabus for \$3. The telecasts will be presented Monday through Friday, 6:30 A.M. to 7 A.M. Further information may be obtained from the Writing Department of Correspondence Instruction, University Extension, University of California, Berkeley 4, California.

## ASTROGRAM--OR WHAT WOULD YOU LIKE?

The Astrogram is entering its fourth month with this issue. At the time has come to consider a permanent name for your page. As originally promised, suggestions will be accepted for a new name--or if you like the current one, we would appreciate hearing that, too.

To give you an idea as to the other NASA centers are doing, Langley's paper is called the "Scoop"; Lewis has the "Orbit" and the High Speed Flight Station publishes the "X-Press".

Now, what can you suggest? Send in your ideas to the editor. If you get more than one good name, send them all in and wait for the next issue for latest results. Be sure to include your name, branch, and phone extension together with your suggestion.



Wednesday, January 14, was Federal Career Day at Stanford University. Arrangements for the occasion were conducted by a committee assigned to Stanford composed of representatives of several government agencies, John Leveen representing Ames. The above display, one of many created for the occasion by Harry DeVoto and his Illustration Staff, will also be used at similar programs at other colleges and placement conferences. John Arvesen and Peggy Sue Dressel, of the 10 x 14, are featured in the display.



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VOL. 1

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NUMBER 8

## NASA Acquires Chincoteague Naval Air Station

The Chincoteague, Virginia, Naval Air Station, which the Navy plans to close within a few months, will be transferred to the NASA. Under an agreement reached Friday, January 23, between T. Keith Glennan, Administrator of the NASA, and Thomas S. Gates, Jr., Secretary of the Navy, detailed arrangements are being made for NASA activities to move in as Navy operations phase out. The NASA plans to make use of the station in connection with the nearby Wallops Island Station in its expanding space program. The air station is four miles from the island. Dr. Glennan said only a part of the permanent buildings will be used by the NASA. The staff of

Wallops Island Station, now totaling 90 scientists, engineers and other employees, is expected to increase eventually to 250. Use of a portion of the Chincoteague facilities is expected to save the NASA an estimated \$2.5 million in its launching site construction program at Wallops Island.

With this additional property, the NASA will need to purchase only about 350 acres on the mainland adjacent to Wallops Island, where previous plans called for acquisition of 1200 acres of mainland farm property. However, an additional 1200 acres of marshland area are still to be acquired for electronic equipment which cannot be placed at Chincoteague.

## RESEARCH ADVISORY COMMITTEE CHAIRMEN NAMED

T. Keith Glennan, Administrator of NASA, announced on January 23 the appointment of chairmen of 13 new research advisory committees to the NASA. These committees are being formed to provide technical counsel to national space and aeronautical programs under the management of the NASA and supersede the 28 technical committees and subcommittees of the NACA which went out of existence on December 31, 1958.

"The Research Advisory Committees will provide valuable assistance to the NASA," Dr. Glennan said. They will promote communication and coordination within the scientific community by reviewing research in progress, considering new problems, and making recommendations regarding the direction which future research should take. The committee membership will represent industry, universities and Government organizations.

The 13 committees will review national space and aeronautical research in progress and recommend problems that should be investigated by NASA or other research organizations, and will assist in formulating and coordinating these research programs. They will also serve as a medium for the interchange of information among members of the scientific community regarding technical investigations and developments in progress or proposed.

The chairmen will report to the NASA Administrator. Membership appointments are ordinarily for one fiscal year. However, the initial membership terms will run through June 30, 1960. Each committee will be composed of about 15 members. In addition, three NASA representatives will attend committee meetings, and a member of NASA Headquarters staff will serve as secretary. The committees are ex-

## NASA To Exhibit Projects in Moscow

An American exhibition, which is part of an exchange agreement reached with Russia last year, is being planned for Moscow--opening July 4, 1959. A Russian exhibit will be displayed in the New York Coliseum at approximately the same time.

The American exhibit will include NASA projects with the focal point of the NASA layout being a huge world globe encircled by plastic rods showing the paths of various satellites and space probes, both Russian and U. S. Surrounding the globe will be examples of re-entry research, experimental aircraft and flying platforms.

## DO YOU SPEAK FLUENTLY IN OTHER TONGUES?

NASA Headquarters has asked each center to compile a list of names of those scientists who can speak any foreign language fluently. Those scientists who meet this qualification should contact Dan Wentz, extension 306, immediately.

pected to be operational in the spring and will meet thereafter several times a year.

In addition to its research advisory committees, the NASA will be advised on matters connected with human factors, medical, and allied problems of the manned space vehicle program by the Special Committee on Life Sciences. Dr. Glennan announced the formation of the Special Committee last November.

The Space Science Board of the National Academy of Sciences will provide the NASA with another link to the scientific community by its advice on research progress in the field of space sciences.



# ELECTRONICS COURSES ANNOUNCED AT FOOTHILL COLLEGE

Sixteen courses in electronics will be offered by Foothill College in the evening during the spring semester, according to Dr. Nathan H. Boortz, director of technical education. All evening classes begin on February 9.

Students wishing to register for these electronics courses must first take special counseling examinations to be given on February 7 in the college library. Permission of the instructor is necessary before enrollment in electronics courses, Dr. Boortz said. Only a limited number of qualified students will be admitted.

There is no tuition fee at Foothill College for residents of the area. The only costs are books and supplies and membership in the Associated Students organization.

# BILL LEAK IS NOW AN AUTHOR!

According to the Spartan Daily, the San Jose State College newspaper, Bill Leak, of the Electronic Instrument Branch has recently completed a play which will be produced this spring by San Jose State College.

In addition to his 40-hour a week job at Ames, Leak is also a full-time student at San Jose and took time during his Christmas vacation to write "Jolly Roger," a musical comedy concerning a modern-day smuggling ring operating off the coast of Africa. A physics major in his senior year, Leak plans to be production manager of the show, but says, "Writing is only a hobby with me. As long as I don't have to make money at it, I can enjoy it." He plans to continue in research work upon graduation.



BARBARA BLOIS,  
HENRY CITTI, JR., WED

Barbara Blois, of the Illustration Section, and Henry Citti Jr., of Procurement and Supply Branch, were wed at the Church of the Wayfarer in Carmel on Saturday, January 10. A reception was held at Svendsgaard Lodge, Carmel, followed by a wedding supper at the Spindrift in Monterey. The couple now resides in Palo Alto.

# NEW NASA APPOINTMENTS INCLUDE BILLINGSLEY, BRACKETT AND OTHERS

Henry E. Billingsley has been appointed Director of the Office of International Cooperation of the NASA. Billingsley was formerly Chief of the Western European Division in the Defense Department's Office of Internal Security Affairs. He will head an NASA-sponsored program to coordinate U. S. non-military research and development in aeronautical and space matters with similar work of other nations and international organizations.

Ernest W. Brackett was appointed Director of Procurement and Contracting of the NASA, effective Monday, January 19. Mr. Brackett was formerly Contract Specialist and Consultant to the Director of Procurement and Production for the Air Force Air Materiel Command.

Other recent appointments include: Addison Rothrock, assistant to Program Planning, Evaluation Director; P. M. Lovell and Robert E. Littell, assistants to the Director of Aeronautical and Space Research; Alfred S. Hodgson, Director of Management Analysis; Gerald O'Brien, Assistant General Counsel for Patent Matters; Herbert H. Rosen, Deputy Director of Public Information.

# Personnel-ly Speaking

## PROBATIONARY PERIODS

A review of the meaning of the probationary period may be of interest to both the employees in such periods and their supervisors.

Probationary periods are one year long. Original appointments are subject to probational periods. A reinstatement usually is not. However, a reinstatement may require the employee to complete a probationary period if he had not done so during the previous service on which his reinstatement was based.

A probationary period is defined as the final step in the examination - selection process. It provides the ultimate and indispensable test of actual performance on the job. During this period the supervisor has an opportunity to observe the new employee's performance and conduct closely to determine whether he is in fact a satisfactory employee and worth retaining. The supervisor should try to understand the employee's problems and give him proper guidance. He should study the employee's potential and character traits to the end of determining whether he is suited for successful government work in his field. If it becomes apparent after full and fair trial that the employee's conduct, general character traits or capacity are not such as to fit him for satisfactory service, the supervisor should initiate action to separate the employee. During a probationary period an employee may be so separated with far less formality than would be the case after probation is completed.

Separation, as referred to above, should be initiated as early as the facts become apparent. To insure that no unsatisfactory employee is allowed to complete his probationary period by "default" as it were, regulations provide for a signed appraisal of each probationer before the end of his tenth month of service. In making such an appraisal, the supervisor must face the issue squarely and sign a statement that says the employee is satisfactory and that he recommends retaining him, or that he is unsatisfactory and should be separated.

There is no official action -- no document issued at the completion of a probationary period. Completion of the required service, however, automatically ends the period.



## VISITORS AT AMES

Among visitors at Ames last week was Professor Kinzo Hida, of the Department of Applied Physics, College of Engineering, University of Osaka Prefecture, Sakai, Japan. Professor Hida is considered an expert on transonic flow and supersonic and hypersonic flow around blunt bodies.

The trip to the United States is Professor Hida's first out of Japan and his first by airplane. En route to the California Institute of Technology, where he will do research for the next nine months, Professor Hida stopped at Ames Monday and Tuesday, January 26 and 27.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, phone 385. Deadline: Thursday between publications. Editor: B. P. Wilson. Reporters: NASA employees.

On the 27th, he presented a lecture on "The Flow with a Detached Shock Wave" to members of the research staff.

Another visitor to Ames on Monday, January 26, was freelance writer Don Murray, who was here gathering facts for a forthcoming article on the NASA being prepared for the Readers Digest.

## STANFORD TO OFFER NEW COURSE IN AERODYNAMIC HEATING

Stanford University will offer a new course in the Aeronautical Engineering Division for the spring quarter 1958-59 academic year. The subject of the new course will be Aerodynamic Heating and it will be given by Mr. Morris W. Rubesin, who is a recognized authority in the field of aerodynamic heating and was, until recently, a member of the Ames staff.

For the current academic year, the course will presume graduate standing and a general background in fluid dynamics, but no extensive knowledge of boundary-layer theory.

## WANT ADS

For Sale--1954 Plymouth, cheap. New fan belt, fuel pump, tune-up kit, 6.70X15 tire chains and 12-volt sealed beam trouble lamp with extension cord. Call Ames at 244.

Attention Photographers--I can get surplus enlarging paper guaranteed and dated March-June 1959 at extremely low prices. Typical price is 100 sheets 8x10 DW glossy for about \$4.50. Also large rolls are available. This is standard paper--Kodabromide, Haloid, Konvira, etc. The only catch is that I cannot use so much paper since one needs various grades. (Smallest amount sold is 100 sheets.) I would like to contact other photographers who are interested in purchasing some of this paper. M. Kussoy, ext. 327.

Found--In Unitary: Oatmeal leatherskin glove. Phone ext. 355, ask for Irene.

Wanted--From Morgan Hill. Will pick up anyone along Bayshore. Irene Tharpe, ext. 355.

For Sale--K & E Log Log Duplex Historic Slide Rule. Low mileage! Call Bob Barnett, ext. 363.

For Sale--Martin Tenor Guitar (4-string), like new. Easy to play (ukelele chords). Has one quality of 6-string guitar. \$83 value, case and chord book included, will sell for \$55 full price. Call Jean Ward, ext. 247. Diner 5 PM, DA 3-6283.

## ROCCO SICILIANO TOURS AMES...



During a recent visit to Ames, Rocco Siciliano, Special Assistant to the President for Personnel Management, heard several discussions on current research activities here. Left to right above are Bill Harper, Branch Chief of the 40-X 80-foot Wind Tunnel, Siciliano, Bernard Rosen, Director of the 12th U. S. Civil Service Region, and David McAfee, Assistant to Siciliano.

Siciliano arrived in San Francisco Monday, January 19, where he was scheduled to be the principal speaker at a luncheon held at the Sheraton-Palace Hotel honoring the 76th Anniversary of the enactment of the

Civil Service Act. Expressing an interest in seeing Ames, he was invited to tour a number of facilities here. Accompanied by Rosen and McAfee, he visited Ames on January 20, and was a guest at a luncheon here that afternoon.

Prior to his appointment as Special Assistant to the President, Siciliano was Legal Assistant to Board Members, National Labor Relations Board, Assistant Secretary-Treasurer for Procon, Inc., and an Assistant Secretary of Labor. A native of Salt Lake City, Utah, he is a graduate of the University of Utah and Georgetown University Law School.



## Ames Closeups



LYSLE MINDEN

What frequently starts out as a peaceful pastime has a way of becoming a full time business. That's what happened to the Lysle Mindens of Winchester Road, Los Gatos. As in the cases of many other Ames employees, Lysle's hobby has turned into a flourishing enterprise--one of 1600 square feet under glass where over 1500 orchid plants are cultivated. Of course, Lysle devotes 40 hours a week to his job with the Construction Engineering Branch here at Ames, in addition to his "hobby". Mrs. Minden does most of the "cultivating", he says, but Lysle built the greenhouses and does most of the spraying and fertilizing.

Coming to Ames almost 19 years ago from Mare Island where he had been in drafting work for five years, Lysle had been with Ford's Richmond plant for five years, and the Caterpillar Company's plants in Spokane, Stockton and San Leandro for ten years. A native of Kansas, Lysle had been raised in eastern Washington and Idaho before migrating southward with the Caterpillar Company.

One of a group who formed the Ames Garden Club, which was active for 3 or 4 years and then disbanded, Lysle is also a member of the Welfare Club and a charter member and officer of the National Federation of Federal Employees since its inception in 1946. He is now Bay Area Council Chairman for this organization.

About 20 years ago, the Mindens started raising orchids and now have the finest private collection of Cymbidium Orchids in the bay area. This particular species has excellent keeping qualities and blooms in all pastel

## FILM CLASSICS CLUB SHOWS "RED BADGE OF COURAGE"

The Film Classics Club will offer "The Red Badge of Courage" starring Audie Murphy, on Friday, February 13, at 8 P. M. sharp, in the Ames Auditorium. Admission will be by season ticket only.

At last count, only 160 tickets were sold. As an alternative to cancelling several features, the committee decided instead to cancel the remaining short subjects. The committee regrets this has to be done and will refund the price of the ticket to anyone who wishes to stop his membership on this account.

shades except blue from December through June. The original species were found in the Himalayas and in the Philippines and were cultivated in England and Holland before being brought to America. The plants are bought as seedlings and receive very careful attention during their early growth with temperatures kept up to about 62° at all times. Later, the temperature can drop to 40° without becoming critical. Orchid plants can be raised in a patio, Lysle says, since they can easily be covered to protect them from a frost. The plants are grown with barely any soil. The growing mixture is composed of porous material such as peat moss, sphagnum moss, leaf mold, and a small amount of animal fertilizer. "We started this as a hobby," Lysle says, "because we can both work at it and it doesn't tie us down. We just spray twice a month, chemically fertilize them once a week during the blooming season and water them." About ten years ago the Mindens started growing them commercially. Local flower shops and wholesalers from San Francisco are their big customers. Lysle plans to devote full time to his orchids when he becomes eligible for retirement in September 1961.

With a family of four boys, four girls, and four grandchildren, Lysle says he and his wife are still the most ardent orchid enthusiasts in the family. "I got help from the boys in building the greenhouses," he says, "but the girls don't take too much interest in growing orchids. However," he adds, "they sure do like to wear them!"

## Astrogram or?

Names are coming in from many branches for the Astrogram. Have you sent in your suggestion yet? Just one week left until the committee will meet to select the name one of you has sent as most appropriate for this newspaper. Send in your suggestion to the editor before Friday, February 13.

Your idea should combine one name the thoughts that is a newsletter or newspaper and it is for and about aerospace research personnel. Same "Space Lab Oratory"--this belongs to Jet Propulsion Laboratory; so hands off! Now send what ideas you can come up with. But hurry--remember, the line is next Thursday. Suggestions must be in this office no later than 9 A. M. Friday morning.

## NASA SIGNS CONTRACT FOR HIGH-THRUST ROCKET ENGINE

The NASA and the Rocketdyne Division of North American Aviation, Inc., Canoga Park, California, signed a formal contract for \$102,000,000 covering design and development of a rocket engine in the one to and one-half million pound thrust class, on January 19. Work on the program, which may extend from four to six years, is already in progress.

The engine being developed will be a liquid bi-propellant single-chamber booster rocket. The capacity will be far greater than any single-chamber engine now in existence.

Technical direction of the program by NASA is the responsibility of Abe Silverstein, Director of Space Flight Development. The project is managed by Abraham Hyatt, NASA Assistant Director of Propulsion Development. Adelbert Tisler, Chief of Liquid Fuel Rocket Engine Programs, is project officer.

## THREE MEN MAKE "TWO GALLON" CLUB

With the recent visit of the Santa Clara Valley Bloodmobile unit last week, three Ames employees brought the blood donations up to over two gallons and received their "Two Gallon" pins. Included in the trio were Leland Goularte, Ernest Medeiros and Paul Nelson, all of the Structural



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

FEBRUARY 19, 1959

NUMBER 9

EARTH IS LESS LIKE TOMATO  
-MORE LIKE PEAR!

There are those of the old school who remember being taught that the Earth was round like an orange. Some who came later heard that the Earth bulged slightly at the equator and was, therefore, more like a tomato. Now comes the disquieting news from members of the old school that studies of the orbital flight of a Vanguard satellite indicate this planet is shaped less like a bulging sphere and more like a pear--and we are living on the narrow end!

Studies made by J. A. O'Keefe, Ann Eckels, and R. K. Squires of the NASA, indicate this to be the case. The information used in the studies was obtained by Dr. W. Siry of NASA's Vanguard Division, and results were presented by Dr. O'Keefe during the annual meeting of the American Physical Society in New York City recently.

Dr. O'Keefe is Assistant Chief of the Theoretical Division of NASA, and Miss Eckels and Mr. Squires also are members of the Theoretical Division.

Scientists are interested in the shape of the Earth because it tells us of the structure and strength of materials inside. If the Earth is symmetrical, it indicates an elastic layer under the crust while proof of a non-symmetrical surface would indicate strength inside the Earth.

The new findings show that the sea level at the north polar cap is raised by about 50 feet above what has been considered normal. At the south polar cap, the sea level is lower by about 50 feet. In the northern hemisphere, outside the polar cap, the sea level is lower by about 25 feet. Correspondingly, the region in the southern hemisphere outside the polar cap is raised by a similar amount. The combined effects of these variations cause the Earth to be slightly pear-shaped, with the more narrow end at the Arctic and the broad base

## NASA Liaison Office At Wright-Patterson To Close

The Liaison Office of the NASA at Wright-Patterson Air Force Base, Dayton, Ohio, will close about April 1, 1959, T. Keith Glennan, NASA Administrator announced today. The decision to close the office was based on the growing diversity of research project details which the one-man office can no longer adequately handle, Dr. Glennan said.

In the past few years it has become more frequently necessary for technical specialists of the NACA, and since its establishment on October 1, 1958, the NASA, to visit the Air Research and Development Command for personal consultation. This method of personal contact is the most effective means of continuing close liaison between the research and development activities of the NASA and the Air Force, Dr. Glennan said.

The current NASA Liaison Officer at Wright-Patterson, William J. Underwood, has been appointed Assistant to the Chairman of the Civilian-Military Liaison Committee. He will also serve as Committee Secretary. Underwood will assume his new duties about April 1. The committee will maintain offices in the NASA headquarters, Washington, D. C.

in the Antarctic.

The change in the shape of the Earth theorized by O'Keefe, Eckels and Squires, is expected to help in better understanding the strength characteristics of the hot rock which supports the Earth's mantle and crust. Their findings will contribute to future studies on the gravitational field surrounding the Earth. In particular, their theory will have to be considered when analyzing gravitational data from future geodetic satellites and other space experiments launched as part of the National Space Program.

ONE OUT OF THREE  
AMERICANS CARRIES TB  
GERM IN HIS BODY

Today, despite a sharp decline in TB deaths in recent years, TB is still a major communicable disease. One out of three Americans has the germ in his body. From this group will come future TB victims.

Still the most costly disease, the U. S. spends more than \$700 million a year to care for TB. With a quarter of a million active cases in our country alone, 15,000 die each year, one hundred thousand new cases of TB are reported each year.

TB can smolder for many years without a person being aware of his condition, before it bursts into flame, but the tuberculin test and the chest X-ray can find the disease early, when it can be cured most easily.

Fighting TB is a slow and costly job. Unknown victims must be found through tuberculin testing and chest X-rays. They must be treated with drugs, sometimes with surgery, and always with careful nursing.

What can you do about it? Keep up your health and that of your family to maintain high resistance to tuberculosis. Youngsters should be tested as well as older people. Take advantage of the free X-ray service provided by the Santa Clara County Tuberculosis Association's Chestmobile unit.

This year the mobile unit will be at Ames on March 4, 5, and 11. Cards have been circulated to all

(Continued on Page 2)

## Astrogram or??

The deadline for sending in suggestions for renaming the Astrogram is past, and all suggestions are now in the hands of the committee. Twenty-five suggestions were submitted, including "Astrogram"! Announcement will be made of the committee's choice in the next issue of the paper.



### ENGINEERING WEEK DINNER TO BE HELD AT SHERATON- PALACE IN SAN FRANCISCO

Engineering Week in the Bay Area will be climaxed by an Honors Night Dinner to be held at the Sheraton-Palace Hotel in San Francisco on February 25, 1959. The keynote address, "Space Age in the Pacific", will be made by Admiral Jack Monroe.

Only 700 tickets are available. The cost is \$5 each. Interested parties may obtain their tickets by calling Don Horning at BEacon 5-6000, ext. 211.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, phone 385. Deadline: Thursday between publications. Editor: B. P. Wilson  
Reporters: NASA employees

### HERE ARE THE FACTS ABOUT YOUR MOFFETT FIELD EMPLOYEES CREDIT UNION

Your Credit Union is an organization to help you save money with security. When the time comes that you must borrow, you can do so at a low rate of interest without penalties.

The Credit Union at Moffett Field has been in operation almost two years and has declared a dividend of 4½% for 1958 with a membership nearing the 600 mark and a loan subscription of well over \$75,000 for this year.

Members please note new office hours--11:45 to 12:30 noon and 4:00 to 4:45 Monday through Friday. The office is located on Navy side, Building 62 (former Bank of America building).

Join now, if you are not a member. Application blanks are available at above address or see one of the Credit Union Officers. You may also write to Moffett Field Employees Credit Union, Moffett Field, California.

Please send in your pass book for auditing and dividend entries, and be sure to notify the C. U. office if your pass book has been lost or if you have had a change of address.

## Personnel-ly Speaking

### NEW SCHEDULE OF INSURANCE ESTABLISHED

Based on our excellent claims experience to date under NASA-HLIC group life policy GL-661, the Home Life Insurance Company has agreed to establish a new "Schedule of Insurance" under the policy, effective April 1, 1959. The new Schedule, which was unanimously approved at the recent Board of Governors meeting in Washington, is set forth below:

Description of Class EMPLOYEES WHOSE BASE ANNUAL EARNINGS ARE:		Life Insurance Face Amount	Employee's Quarterly Payment
Class 1	Less than \$4,000	\$ 2,000	\$ 2.60
Class 2	\$4,000 but less than \$5,000	4,000	5.20
Class 3	\$5,000 but less than \$6,000	6,000	7.80
Class 4	\$6,000 but less than \$7,000	7,000	9.10
Class 5	\$7,000 but less than \$8,000	8,000	10.40
Class 6	\$8,000 but less than \$10,000	10,000	13.00
Class 7	\$10,000 but less than \$12,000	12,000	15.60
Class 8	\$12,000 but less than \$14,000	14,000	18.20
Class 9	\$14,000 and over	15,000	19.50

As will be noted, this Schedule increases the maximum amount of insurance coverage under the policy from the present \$10,000 to \$15,000. It also establishes more realistic salary ranges and amounts of insurance protection within the class structure. These changes are based on numerous requests by Association members to increase insurance coverage under the plan.

The new Schedule will apply to all NASA employees insured under the policy as of April 1, 1959, and also to all new enrollments after that date, with the following exception. A currently insured member may decline the additional insurance under the new Schedule by signing an appropriate waiver card which is available in Fiscal and must be sent in by March 1 to the Personnel office. In such event, the employee will retain his present dollar amount of insurance coverage under the policy (upon payment of premiums when due) pending any change in his base annual salary which would place him in a different class under the new Schedule. At such time, the new Schedule will apply.

The HLIC has also approved a request by the Board of Governors for a temporary extension of the enrollment eligibility period for new employees hired by the NASA since October 1, 1958. Under this extension, all employees who enter on duty in the NASA between October 1, 1958, and February 28, 1959, may enroll in the group insurance plan at any time up to and including March 31, 1959, without medical examination. The insurance for such employees will be effective April 1, 1959. Employees entering on duty on and after March 1, 1959, will have the usual 31-day eligibility period in which to enroll without medical examination.

### VISITORS AT AMES

Constantine, Duke of Sparta, Crown Prince of Greece, was guest at Ames Thursday, February 12, touring a number of our facilities.

On Friday, February 6, William Hines, Science writer for the Washington (D. C.) Star visited here.

FILM CLASSICS CLUB OFFER  
"THE LAST BRIDGE"

"The Last Bridge", starring Maria Schell and directed by Helmut Kautner, will be shown at 8 P. M., Friday, February 6, in the Ames Auditorium. The picture features German dialogue with English subtitles.

(Continued from Page 1)

branches which must be filled and returned to the Personnel office by tomorrow, February 6, for those wishing to avail themselves of this service. Return your card today, now, while you think of it.





SCENES FROM RECENT AMES PARTIES!

## May Day Soirée!

FRIDAY EVENING, MAY 1, AMES AUDITORIUM

Here's a chance to let your fellow employees know what you do with your spare time. The soiree is a show case of your hobbies or special talents.

The Committee has only contacted a few people so far, but already 23 have signed up. They are:

- |                            |                                  |
|----------------------------|----------------------------------|
| Astronomy Exhibit          | - Walt Krumm, 14'                |
| Artist Colony              | - Bill Ward, Model Constr        |
|                            | - Lois Clousing, Illustration    |
|                            | - John Foster, F.I.R.            |
| Orchid Growing             | - Lysle Minden, Const Eng        |
| Cameo Display              | - Ray Addison, Mech Instr        |
| Soaring Plane              | - Earl Menefee, Mech Eng         |
|                            | - Derrill Hansen, Const Eng      |
| Stereo Slide Demonstration | - Vernon Nicholson, Dyn Analysis |
| Antique Collection         | - Hank Citti, Machine            |
| Photographic Arts          | - Lee Jones, Photo               |
|                            | - Art Melliar, Photo             |
|                            | - Dave West, Photo               |
|                            | - Hugo LeGros, Photo             |
| Ceramics                   | - Barbara Citti, Illustration    |
| 35 mm Color Slides         | - Eldon Harris, Airc Mod         |
|                            | - Jim Chloupek, Airc Mod         |
|                            | - Merrill Nourse, Elec           |
|                            | - Gaeton Faraone, Photo          |
|                            | - Ralph Mains, Security          |
|                            | - Mary Swain, FIR                |
|                            | - Jim Swain, FIR                 |
|                            | - Harry DeVoto, Illustration     |

Do you collect mugs or jugs, cups or pups?

Do you collect rocks or rocking chairs? Do you collect skins or go skin diving?

If you wish to be an exhibitor too, fill out Form A on reverse side. If you wish to participate in the 35 mm slide show, fill out Form B on reverse side. Then fold form and drop it in the mail.



EXHIBITOR'S RESERVATION FORM

I want to reserve space for an exhibit at the May Day Soiree.

I will need an area \_\_\_\_\_ feet by \_\_\_\_\_ feet.

I will need \_\_\_\_\_ table(s).

I will need an electrical outlet, Yes \_\_\_\_\_ No \_\_\_\_\_

Name \_\_\_\_\_

Branch \_\_\_\_\_

Phone \_\_\_\_\_

Type of Exhibit \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Form A

----- Fold Here -----

COLOR SLIDE EXHIBIT

MAY DAY SOIREE

Please enter the following slides in the Slide Show:

<u>Title</u>	<u>Data (Subject, Location, etc.)</u>
a. _____	_____
b. _____	_____
c. _____	_____
d. _____	_____
e. _____	_____

Name \_\_\_\_\_

Branch \_\_\_\_\_ Phone \_\_\_\_\_

Form B

----- Then Fold Here -----

From \_\_\_\_\_

\_\_\_\_\_

**Hy Zimmer, Chairman**

**Ames Entertainment Committee**



## Ames Closeups



WALTER KRUMM

Occasionally you may step up to the cash register in cafeteria here at Ames and hand your cash over to the man pictured above. A member of the cafeteria staff? No, Walt Krumm is an engineer in the 14-Foot Subsonic Wind Tunnel Branch. He still likes to take your money when he gets an opportunity to be used to be a cashier for a few years before coming to Ames 15 years ago, and hasn't gotten over the habit yet!

Walt is a native of New Jersey, but has been a resident of California since 1920. He attended San Jose State College during the early 30's, and following several years with Safeway, he came to Ames during World War II. His home is in Cupertino where he and his wife, and two daughters, 15 and 19, engage in amateur astronomy.

"I've always been interested in astronomy," Walt says, "but my eldest daughter aroused my desire to develop this interest." As a result, Walt built his first telescope back in 1950. This was a 6-inch reflector which has since been followed by a 4-inch, and a 10-inch now in progress. (Walt will exhibit one of his products at the Ames "soiree" to be held here May 1.) He was a member of the Peninsula Astronomical Society in Palo Alto until he organized the San Jose club in 1956. He is currently chairman of the Western Amateur Astronomers, an affiliation of member clubs of six western states.

To round out his Tuesday evenings, Walt teaches amateur astronomy and telescope-making at Fremont High School as part of the adult education program, and has published an atlas of visible stars for use in his class.

He is a regular participant at "star parties" where various clubs meet with their instruments to observe the heavens. Such meetings may be held on Mt. Diablo, Mt. Tamalpais, or Mt. Hamilton. The library at Mt. Hamilton's Lick Observatory is a handy source of information which Walt uses frequently.

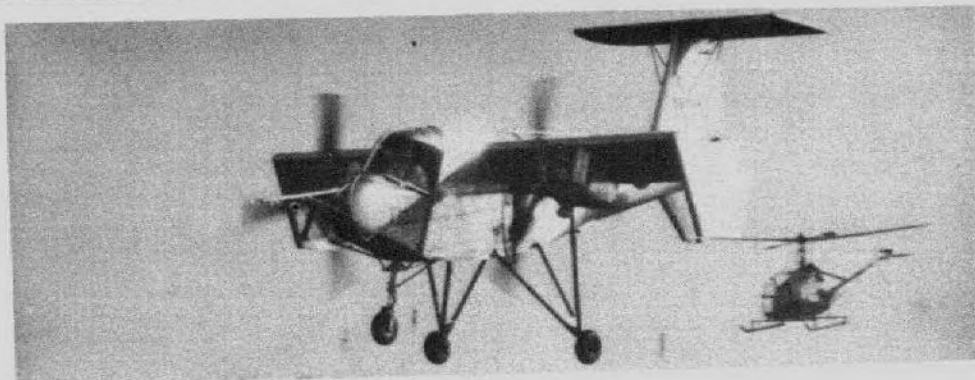
This year a combined convention of astronomical societies from several states is meeting in Denver, Walt says. But he is looking forward to 1960 when San Jose will be host to a meeting of western astronomical societies.

In connection with his work on telescopes, Walt has been assigned projects involving the optical systems in the Schlieren and Shadowgraph processes used in the 14-foot Tunnel. Starting in a forthcoming issue of the Astrogram, Walt will also author a column on our planets with references to the planet chart appearing in the next issue--he suggests you save the chart.

If you have any questions concerning his column, just check with him any time you catch him in the cafeteria. He'll be happy to give you a complete explanation--but don't try to slip the pie and coffee past him; you won't make it!

## RYAN VERTIPLANE DAMAGED IN LANDING ACCIDENT

The Ryan Aeronautical Company's Vertiplane, which had been undergoing a series of company flight tests here, was extensively damaged in a landing accident on the Moffett runway Friday, February 13. Flying the Vertiplane was Peter F. Girard, Ryan's Chief



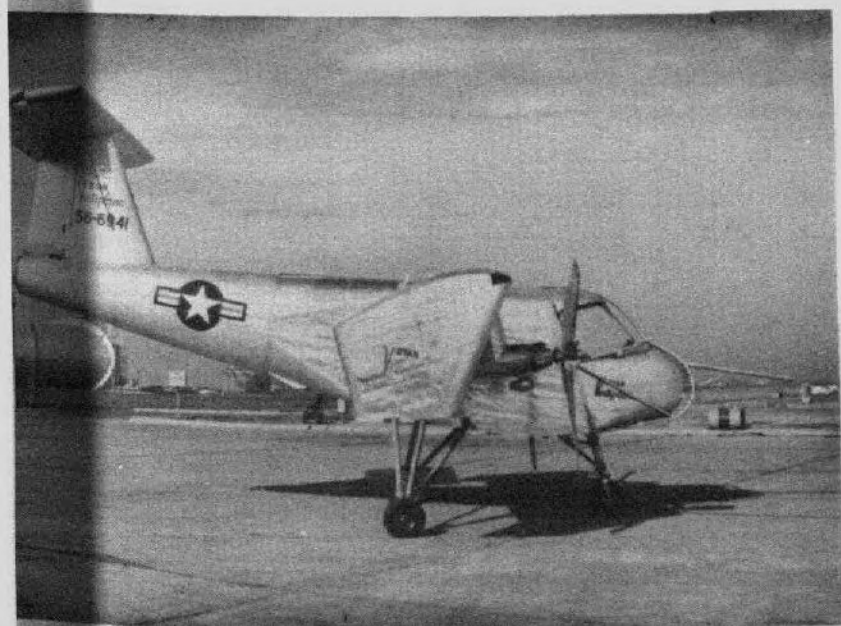
Engineering Test Pilot, who sustained minor injuries in the form of fractured bones in one foot.

Following a series of test flights, the Vertiplane was to have been assigned to Ames Research Center for research purposes.

The Vertiplane arrived at Ames last summer for a series of evaluations in the 40- by 80-foot Wind Tunnel. As a result of these tests, the Ryan Company made certain changes in the experimental vehicle.

The accident to the Vertiplane has altered the program of VTOL research in which it was originally scheduled to participate.

Vertiplane is pictured at left. Picture above shows plane in recent test flight.





## WANT ADS

WANTED--Driver with car to join car pool from Willow Glen-Palmhaven district, SJ, via Park Avenue. 8 - 4:30 shift. Call Harold Mathews, ext. 298.

FOR SALE--'53 Chev Bel Aire 4-door. Radio, heater, & Power-glide. WW tires. Clean throughout. \$695. Call Bill Balandis, ext. 218.

FOR SALE--Hi Fi, almost new. Pickering fluxvalve, diamond stylus, cartridge & arm. Cost \$60. Will take \$35. Call ext. 352.

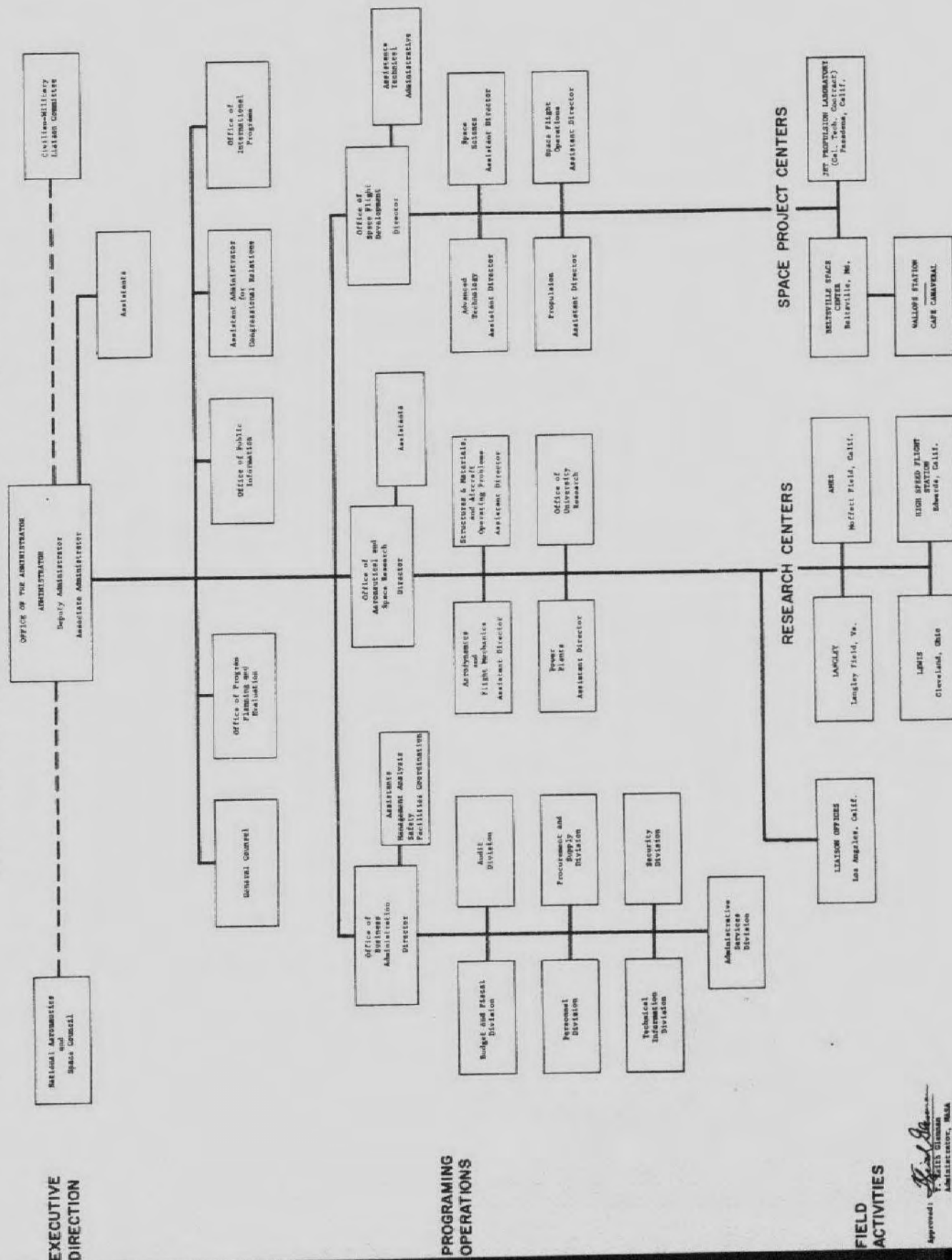
WANTED--Ride from Fremont area. Call Bonnie Patrick, ext. 278.

FOR SALE--'42 Plymouth 4-door sedan. \$55. Call Brent Greer, ext. 206. After 5, Yorkshire 7-1754.

FOR SALE--9 cu. ft. Phil Refrigerator, \$90. Excellent condition. Freezer compartment, meat drawer, adjustable shelves, vegetable crispers, cube trays, porcelain interior, white de luxe finish. Call Harry Miller, ext. 352, or DA 3-1546.

WANT TO JOIN RIDE GROUP Area of Highway 9 and Pr Paul Chung, 6605 Dartmoor SJ. Call ext. 327, or AL 8395.

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



Approved: *[Signature]*  
Special Assistant to the Administrator, NASA  
Date: 29 April 1969



The

# Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. 1

MARCH 5, 1959

NUMBER 10

## 3.5-Foot Hypersonic Wind Tunnel Spheres Completed

Since May 21, 1958, construction has been in progress northwest of the Unitary Plan and Tunnel buildings. On that date, work was begun on the foundations of the four yellow spheres that have since arisen here. The spheres, part of the 1,000,000 Hypersonic Wind Tunnel project scheduled for completion late this fall, are now complete except for painting. Of the total expenditure allotted, a sum over \$8,000,000 in contracts has been awarded to date. The structure now rising south of the spheres will house the offices of the tunnel staff. In addition, the complete operating unit will include the test chamber and tunnel, an equipment building, a large pebble-bed heater, and 16 high pressure tanks for storing air and helium under 3,000 pounds pressure. The tunnel will operate with various mixtures of heated helium and air. After passing through the heating unit which will raise the temperature to

4,000°, the mixture will flow through the tunnel at hypersonic speeds and into the four vacuum spheres. From here it will be pumped through a processing plant where the helium and air will be separated and stored once again in the pressure tanks.

Construction of the various parts of the project is being accomplished by a number of contractors. Paul R. Radach and Henry Jessen, Jr., are project engineers for Ames. CONSTRUCTION OF 12- BY 12-INCH HYPERSONIC HELIUM TUNNEL BEGUN

The yellow spheres rising about one block east of the 4 spheres recently completed for the 3.5 hypersonic tunnel, are not a part of the same project. These spheres are part of the 12- by 12-Inch Hypersonic Helium Tunnel to be built there soon. With approval of construction given last September, over one-third of the \$1,585,000 allotment has been obligated, and remaining contracts will be

(Continued on Page 2)

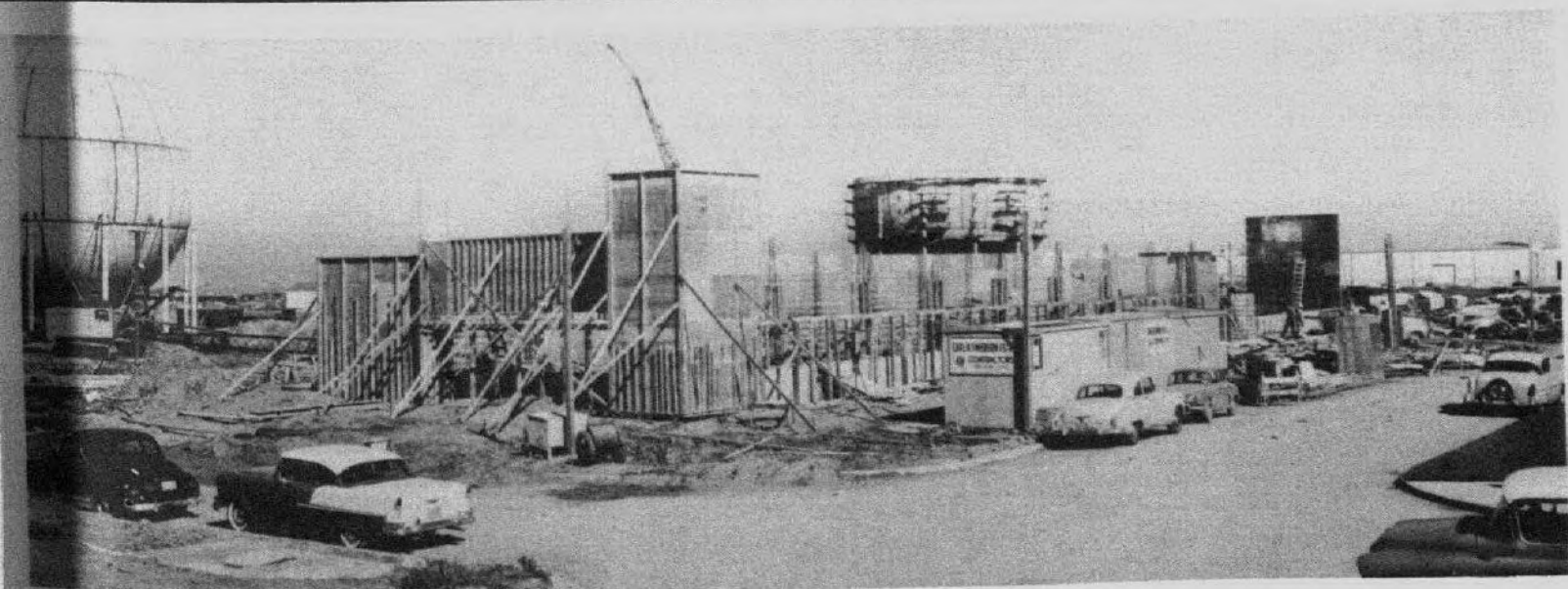
## Astrogram

After due consideration, the decision has been made to retain the name "Astrogram" for Ames bi-weekly newspaper. Twenty-five names were submitted, many deemed to be as appropriate as "Astrogram", but none were found to be more so.

Honorable mention should go to two submissions, "The Mach of Time" and "Aerospace", sent in by Glen A. Weidlich (Photo) and L. L. Presley (6 x 6), respectively. Other interesting submissions included "The New ARC Times" and "The Planet Pusher", submitted by Carline Pierce (Personnel) and Gerald A. Johnson (Transportation), respectively.

## FILM CLASSICS SCHEDULES "THUNDERBOLT" FOR MARCH 13

"Titfield Thunderbolt", starring Stanley Holloway, George Relph, Naunton Wayne, and John Gregson, will be the Film Classics presentation Friday evening, March 13, at 8 p. m. at the Ames Auditorium.



The new office building for the 3.5-Foot Hypersonic Wind Tunnel rises in center above. One of the four vacuum spheres now completed is pictured at the far left. The semi-completed sphere rising behind the office building will be part of the 12- by 12-Inch Hypersonic Helium Tunnel soon to be constructed in the area adjoining the 3.5-Foot.



## LORRAINE AND ED VERNON Seek Patent!

In a memorandum to the Personnel Officer, Lorraine Vernon, of Personnel, announced that she and her husband, Ed Vernon, of Aviation Sheet Metal, were seeking a patent on their latest invention. In the process of development since their marriage 13 years ago, the "invention" is nothing less than the Vernon heir whose arrival is anticipated in September!

Ed joined Ames staff in 1940, Lorraine in 1942. Both are continuing here physically, but mentally they are already in the starry orbit reserved for parents expecting their first blessed event.

(Continued from Page 1)

awarded soon.

Other construction plans for the near future include a hypervelocity research laboratory and modifications and additions to the Flight Research Laboratory.

## THREE-DAY INTRACENTER CONFERENCE HELD AT AMES

Representatives from Headquarters, Lewis, Langley, Western Coordination Office, High Speed Flight Station, and the Jet Propulsion Laboratory met here February 25 through 27 for an intracenter conference. Subject of the meeting was "Guidance Control Problems".

Similar conferences are held throughout the year whenever the need arises.

## UC ANNOUNCES 1959 UNIVERSITY EXTENSION COURSES

The University Extension of the University of California has announced its 1959 correspondence courses. Those interested may contact John Leveen, Ames Training Officer, extension 260, for complete information on courses available.

## Ames Closeup



WILLIAM WARD

Perhaps you met Bill Ward the Wilshire Art Galleries in Hollywood when he was presenting a one-man show. Or, maybe you saw his work on display at the DeYoung Museum or the Legation of Honor in San Francisco where it was shown for five consecutive years. Or, maybe you just know Bill Ward as the amiable chairman of the Model Construction Branch here at Ames.

Bill came to Ames almost 10 years ago, at which time he started the "model shop". A native of London, England, he migrated to Boston with his family in 1916. Following service with the Marine Corps, Bill came to Pasadena, California, in 1925, worked for Douglas Aircraft in Santa Monica for a time, and came to San Francisco in 1930 where he opened an art studio and became engaged in commercial and fine art painting.

During his travels, Bill has been fortunate enough to study with many well-known artists. He built a studio with George De Otis, a landscape painter, in Kentfield. This association was followed by his one-man show.

(Continued on Page 3)

# Personnel-ly Speaking

## DESIGNATIONS OF BENEFICIARY

As a government employee you may have, at the time of your death, money in three different funds, which is payable to your beneficiary or beneficiaries. These possible sources of money are, (a) unpaid salary or other compensation due you, (b) the money in your retirement fund which is not payable in annuity form, if any, and (c) your Federal Employees' Group Life Insurance if you carry that insurance.

If you do not make a specific designation to the contrary, the monies from these sources will be paid to the first person or persons listed below who are alive on the date title to the payment arises:

1. To the widow or widower.
2. If neither of the above, to the child or children in equal shares, with the share of any deceased child distributed among the descendants of that child.
3. If none of the above, to the parents in equal shares or the entire amount to the surviving parent.
4. If none of the above, to the duly appointed legal representative of the estate.
5. If none of the above, to the person or persons determined to be entitled thereto under the laws of your place of residence -- "next of kin", etc.

You do not have to designate a beneficiary. Many employees are satisfied with the standard order listed above. However, if you want to leave the money to a person or any legal entity not listed, or if you prefer a different order of listing, or if you wish to change or cancel a designation you have made previously, obtain the proper form and any necessary instructions from the Personnel Branch. There is a separate form for designating beneficiaries to receive the money from each one of the three sources listed above. The execution of a form to designate who will receive your insurance money, for instance, will have no effect on the distribution of money from your retirement fund.

If you have previously made any designations of beneficiary, you should review your copies of them in the light of your present family status. If changes in the family have occurred, the former designations may result in a distribution of your money not in accord with your present desires.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, phone 385. Deadline: Thursday between publications. Editor: B. P. Wilson. Reporters: NASA employees.



(Continued from Page 2)  
 the Wilshire Galleries. During his exhibition he discovered Otis' much showing up in his work. As a result, he left Otis and studied for a year with R. Jerome Jones, portrait and still-life painter. Currently, Bill has a studio in Los Altos where he lives. He has given classes intermittently over the years in landscape painting. Now he has a class every Tuesday evening in portrait, figure and still-life painting using professional models. Outstanding students have included John Darsow, formerly of Ames, and John Foster,

of Flight Instrument Research.

Several paintings will be displayed at the Ames May Day Soiree, Bill says. He spends many of his free hours painting marine and landscapes and still receives good commissions for portraits. In addition to the exhibits at the DeYoung Museum and the Legion of Honor, he has also shown his work at the Stevens Hotel Gallery in Chicago and has received honorable mentions at several galleries.

The photo at the head of the column is a self-portrait done during a four-month visit to San

Miguel de Allende, Mexico, in 1956.

After retiring from Ames in 1962, Bill plans on travelling and painting. He likes the idea of spending a summer painting in Maine -- but that's three years away, and he says he might change his mind several times before then. There are so many places to go and so much to paint. Is he looking forward to retirement? Bill says he has always enjoyed his work at Ames, but he is not afraid of retirement. After all, he has been preparing for it for the last 34 years.



JEANNE THERKILDSSEN AND DAVID KOENIG WED

Jeanne Therkildsen became Mrs. David Koenig at a wedding held Saturday, February 21. Both bride and groom are members of the 40- by 80-Foot Wind Tunnel Branch. The ceremony was held at 2 p. m. in the Sunnyvale Episcopal Church. Matron of honor was Angela Jacobs, school friend of the bride and a former 1 x 3 staff member. The best man was William Evans of the 40- x 80-Foot.

Dave has been with the 40- x 80-Foot Tunnel since 1950, following his graduation from the University of Oregon, while Jeanne transferred to the wind tunnel staff after the disbanding of the Flight Engineering Section in 1955. J. S. Therkildsen, of Procurement-Supply, is Jeanne's father. Her sister, Kay Harper, also has been employed at Ames.



EVA RAFF WEDS GEORGE PEGOT FEBRUARY 7

Eva Raff, of the Low Density and Heat Transfer Branch, was married to George L. Pegot in a double ring ceremony at the Calvary Methodist Church in San Jose on Saturday, February 7, at 4 p. m.

A reception was held immediately following the wedding in the social hall of the church. The wedding party included the maid of honor, Doris Kirk of EMC; bridesmaids Joan Jessen, formerly of the 40 x 80, and Joyce Kirk; best man Howard Raff, brother of the bride; ushers Ray Raff, also a brother of the bride, and Don Teague; and the bride's and groom's parents.

The bridal bouquet was caught by Miss Peggy Dressel, of the 10 x 14, who, incidentally, is scheduled to be the next bride.

The couple spent a brief honeymoon in Carmel. The groom is employed at Hiller Helicopters, Palo Alto.



watch your savings grow!



Use YOUR CREDIT UNION

#### WHAT IS A CREDIT UNION?

Basically, a credit union is a group of people having a common interest in helping each other by investing their savings together. Their savings earn interest through lending this capital to others at a low rate. Navy and Ames civilian personnel at Moffett Field who have money to invest can do so with security and earn above-average dividends. The advantages in borrowing are, (1) low rate of interest, (2) no penalty for advance payments, and (3) no carrying charges.

#### WANT ADS

Wanted--Young man to share cottage in Woodside with three others. \$37.50/mo., plus utilities. Call Richard Petersen, ext. 317.

For Sale--5 H.P. Sea King outboard motor. \$75. Call Ken Montgomery, ext. 289.

For Sale--10" Craftsman table saw with 1 H.P. motor (used 4 hours), and 12" disc sander with 1/4 H.P. motor mounted on 8' work bench. All for \$140. Call Brooks, ext. 352.

For Rent--In Cherry Chase area, 2 bedroom apt., elec. kitchen, enclosed backyard, children OK. \$125 mo. Call Mrs. Chatten, RE 6-2697.

For Sale--RCA Victor radio and phonograph combination. Large mahogany cabinet with record compartment. Three-speed record player, bass-treble tone control, excellent speaker. Call Harriet Voorheis, ext. 288. Home phone, YO 7-6046.

Wanted to Buy--Girl's 26 inch bicycle. Call Doris Kirk, ext. 208.

#### Still Not Too Late For T-B Chest X-Ray

In the event that you neglected to send in your appointment card to the Personnel office, or if your card became lost, you can still arrange for a free chest X-ray when the Mobile Chest X-ray Unit returns for its final visit on March 11.

Phone 260 right now and make arrangements to get your chest X-ray on that date. A card will be forwarded to you for completion or you can pick one up at the Mobile Unit when you come in for your appointment. But don't delay, phone 260 today.

For Rent--Unfurnished 3 bedroom home near Mariani's in San Clara. Fireplace, beautiful yard. \$130. Call Mrs. Jones, DA 3-3648.

Riders Wanted--From Montevista area. Call Robert Edwards, Alpine 2-6341.

#### Column on Planets and Solar System Scheduled

##### THE PLANETS

	Symbol	Mean Distance to Sun (astronomical units and miles)	Perihelion Aphelion	Eccentricity of Orbit	Tilt of Orbit to Ecliptic (deg)	Sidereal Period (years)	Rotation on Axis	Orbital Speed (miles)	Mean Diameter (miles) See note 1	Mean Density (water=1)	Surface Escape Velocity (miles/sec)	Sun's Mean Gravity at Planet's Orbit (ft/sec <sup>2</sup> )	Minimum-Energy Transit Time from Earth (days)	One-g-Acceleration Transit Time from Earth (days) See note 2
Sun	☉						24d 17h		864,420	1.41	383			
Mercury	☿	0.387 35,980,000	28,522,000 43,388,000	0.2056	7.00	0.2409	88 days (approx.)	29.75	3,100	5.4	2.4	0.1303	106	2.25
Venus	♀	0.723 67,240,000	66,707,000 67,636,000	0.0068	3.39	0.6152	P	21.76	7,700	4.9	6.3	0.0376	146	1.51
Earth	♁	1.000 92,907,000	91,328,000 94,486,000	0.0167		1.0000	23h 56m 4s	18.50	7,927	5.53	7.0	0.0196		
Mars	♂	1.524 141,740,000	137,040,000 146,140,000	0.0934	1.85	1.8809	24h 37m 23s	14.98	4,200	4.1	3.1	0.00845	259	2.08
Asteroids		2.76,000,000 (average)		0.15 (average)	9.5 (average)	1.1195 to 13.70			1 to 480					
Jupiter	♃	5.203 483,900,000	459,960,000 506,810,000	0.0484	1.31	11.8622	9h 50m (approx.)	8.128	86,770	1.33	37.0	0.00072	1,000	5.86
Saturn	♄	9.539 887,200,000	836,910,000 935,570,000	0.0577	2.48	29.4577	10h 14m (approx.)	5.99	74,200	0.71	22.0	0.000215	2,220	6.37
Uranus	♅	19.182 1,785,000,000	1,596,100,000 1,866,200,000	0.0472	0.77	84.0153	10h 45m (approx.)	4.23	32,400	1.3	13.0	0.000053	5,900	12.07
Neptune	♆	30.058 2,797,000,000	2,758,600,000 2,816,600,000	0.0086	1.77	164.7983	15h 40m (approx.)	3.38	30,900	1.6	14.0	0.000022	11,200	15.45
Pluto	♇	39.518 3,670,000,000	2,758,600,000 4,584,200,000	0.2486	17.14	247.6968	P	2.94	P	P	14.5	0.000013	16,700	17.80
Artificial Planet I		153,125,000	91,500,000 214,750,000	0.148	15	1.25	P							
* Moon	☾		225,700 252,000	0.0549	5.15	0.0748	27d 7h 43m	0.629	2,160	3.33	1.5	0.0196	5	

Note 1: Four sources show some agreement, but indicate they are approximations. Even disagree in 2nd significant figure.

Note 2: Straight line flight path used with one-g acceleration half way and one-g deceleration other half.

References: • The Observer's Handbook, Royal Astronomical Society of Canada, 1958  
• The American Ephemeris and Nautical Almanac, 1958

• Norton's Star Atlas and Telescope Handbook  
• The Astronomical Universe, Kragelski, 1952  
• R.T. Jones

In an endeavor to better understand the new space age we are entering, the Astrogram will publish a column each issue dealing with facts about our planet and solar system. Prepared by Walter Krumm of the 14-Foot Transonic Wind Tunnel Branch, the information should prove helpful in better understanding the problems involved in our Lunar Probe and Man-In-Space programs. The chart above provides basic information on our solar system. Watch for the column on the planets beginning in the next issue.



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

MARCH 19, 1959

NUMBER 11

## CHAPMAN WINS ROCKEFELLER AWARD

Dr. Dean R. Chapman, of the Fluid Mechanics Branch, has been named winner of a Rockefeller Public Service Award. The award was made public earlier this week by Dr. Robert F. Goheen, President of Princeton University. These awards, which are made annually, will enable 11 federal career employees to carry forward job-related educational projects during the academic year 1959-60.



Dr. Chapman, a pioneer in space-physics, and at 37 one of the country's outstanding aeronautical scientists, has been a member of the Ames research staff for the past 14 years. Incidentally, he is the youngest of the award winners this year. During the academic year 1959-60, he will concentrate on the study of astronomy, astrophysics, electromagnetic theory and relativity at Cambridge University, England, and will also visit other universities, research laboratories and observatories in England.

(Continued on page 2)

employees and will be sincerely missed by all who knew him.

The funeral was held Thursday, March 12, at 12 noon, at the S.H. Hines Funeral Home, Washington, D. C.

## H. Chamberlin Dies At His Home



Edward H. Chamberlin, Executive Officer of the NASA, died at his home in Falls Church, Virginia, Sunday, March 8. Reported to be in good health, his sudden death came as a shock to his many friends. Mr. Chamberlin was the second oldest employee in point of service in the NACA, and had given almost 50 years to the public service.

Born in Buchanan, Virginia, May 22, 1893, he attended Temple Business College, Alexander Hamilton Institute and the Benjamin Franklin University, all in Washington, D. C. In July 1909, he began his career in the public service as a messenger in the Department of the Interior.

In 1914 he transferred to the Panama Canal Co., and in 1917 went to the National Research Council. On April 24, 1918, he joined the NACA and rose from an appointment clerk to the position of Executive Officer.

Mr. Chamberlin was probably best known as NACA's contracting officer, having negotiated most major NACA construction contracts over a period of many years, and was responsible for NACA administrative functions. He was held in high regard by his fellow

## Dr. Dryden Gives Progress Report

Dr. Hugh L. Dryden, Deputy-Administrator of the NASA, visited Ames on Friday, March 6. During his stay, he addressed a group of Ames employees, giving a brief resume of current NASA progress.

Among the items discussed by Dr. Dryden were the various rocket vehicles now in the planning or developmental stage. These included the following:

**The Scout:** This vehicle, consisting of 4 stages, will include the Jupiter Sr., first stage, the Sergeant, second stage, and two more solid propellant engines for the third and fourth stages. The Scout, designed to put 150 pounds into orbit, will be assembled at Langley Research Center and fired initially from Wallops Island. (See separate story in this issue.)

**The Vega:** Using an Atlas first-stage and the Vanguard first-stage as its second stage, the Vega will be capable of putting a 730 pound payload into orbit. A later version will use a 6000 pound thrust engine now under development by JPL for its third stage.

**The Centaur:** Now under development, it may be ready in about three years. It will consist of a modified Atlas for the first stage, a liquid oxygen and hydrogen second stage, and a storable liquid third stage.

**The Saturn:** This vehicle will be based on the 1.5 million pound thrust cluster now under development; it will have two to four stages. Early vehicles may be ready for flight in 1960.

**The Nova:** Depending on the mission, the Nova may have up to five stages based on a cluster of four of the 1.5 million pound thrust single chamber engines now under development for NASA.

Regarding the man-in-space

(Continued on Page 4)



## Visitors At Ames...

Mr. John W. Crowley, Jr., Director of Aeronautical and Space Research, NASA, and Mr. Ira H. Abbott, his Deputy Director, arrived at Ames on Thursday, March 5, and remained for Dr. Dryden's talk on Friday, March 6.

Edwin P. Hartman of the Los Angeles Western Coordination Office was also present to hear Dr.

(Continued from Page 1)

Dr. Chapman's many contributions to aeronautical literature include a widely discussed "paper" on the conditions of the entry into planetary atmospheres of bodies from satellite or interplanetary flight. He is currently charged with the origination and direction of theoretical and experimental research programs aimed at understanding basic aerodynamic and heat transfer phenomena associated with supersonic flight and atmosphere re-entry.

He holds the degree of Doctor of Philosophy as well as his Bachelor's and Master's degrees from the California Institute of Technology. In 1952, Dr. Chapman received the Lawrence Sperry Award of the Institute of Aeronautical Sciences for a "notable contribution to the advancement of aeronautics by a young man." He was also recently named an IAS Fellow.



FEATURED ON TELEVISION

Ames Research Center was prominently featured on a recent television program on vocations. Bernard Rosen, Director of the 12th U. S. Civil Service Region in San Francisco, was a guest on the program designed to explain to students the opportunities in Federal employment. Mr. Rosen used Ames as an example, describing various positions here and illustrating his talk with pictures, including the one above of Caroline Hoskey, a Math Aid in the 11-Foot Transonic Wind Tunnel Branch, at a data plotting machine. (And a better recruiting device than Miss Hoskey is hard to find.--Ed.)

Dryden on Friday, March 6.

Dr. K. Oswatitsch visited Ames from Aachen, Germany, last week as a guest of John F. Parsons, Associate Director.

Twenty-nine pilots from the Naval Air Testing Center, Patuxent River, Maryland, toured Ames on Friday, March 6, with George Cooper, Chief, Flight Operations Branch, showing them around.

## PROJECT SCOUT UNDER DEVELOPMENT

Project Scout, a low-cost, four-stage solid propellant test vehicle, is being developed for a wide range of aerodynamic and space experiments.

Cooperative development plans for the 35,000 pound, 70-foot vehicle -- to be ready for initial tests by mid-1960 -- were worked out by Dr. Hugh L. Dryden, NASA Deputy Administrator, and General Thomas D. White, Air Force Chief of Staff.

NASA plans for Scout, dubbed the "poor man's rocket" due to its relative low cost, include orbital and high-altitude shots as well as high-velocity re-entry tests. AF plans for the vehicle call for inertial guidance and aerodynamic tests.

A Scout vehicle will cost in the neighborhood of \$500,000 -- substantially less than other test vehicles of its size and capability. It will be capable of putting a 150-pound payload in a nominal 300 mile orbit. In high altitude shots, it would send a 100-pound instrument pack some 5,000 miles high.

The Scout will be composed of the Aerojet (Jupiter) Senior, a modification of an early Polaris motor, first stage; an improved Sergeant by Thiokol, Inc., second stage; a new rocket being developed by Allegheny Ballistics Laboratory, which will be a scale-up of the Vanguard third stage, for its third stage; and the regular Vanguard third stage by ABL for its fourth stage.

## ANOTHER "AMES" WEDDING HELD



Virginia Clover, of the 6-Foot Supersonic Wind Tunnel Branch, was wed to Norman E. Sorenson, of the 9-Foot Supersonic Wind Tunnel Branch, in a ceremony at the Little Chapel of the Flowers in Berkeley on February 21, at 7 p.m. Natalie James, also of the 6-Foot Branch, was the matron of honor. The couple honeymooned in Las Vegas and returned through Davis Valley and up the coast highway and are now residing at 1777-Latham Street, Mountain View.

## Want Ads

- For Sale--Big Twin Evinrude outboard motor, water skis and equipment, life preservers, etc. Call CYpress 4-1654, or W. Kyle, ext. 365.
- For Sale--Hunting Dogs, Brittanys, Spaniels. Phone Tom Gambus, ext. 232, Machine Shop.
- For Sale--Boat, 12-foot car-top aluminum "Fishmaster". Excellent condition. Sacrifice for \$150. Call WH 8-2867 after 5.
- For Sale--1956 Chevrolet Pick-up truck. In very good condition. All new tires, 6 ply. \$1100. Jose M. Gonzales, ext. 249.
- For Sale--1957 Chevrolet 2-Door Station Wagon. Heater, radio, automatic transmission, good tires. Ben Shoemaker, ext. 313 or CHerry 8-6643.
- Wanted--Share-ride driver from vicinity Park and Naglee districts. San Jose, 8 to 4:30 shift. Call Harold Mathews, ext. 298.
- For Sale--Bag Boy golf cart. Edith Watson, ext. 313.
- For Sale--1947 Jeep Station Wagon. Good running condition, clean interior. Phone ext. 310, Norbert Barsi, or Whitecliff 8-5968.



## Ames Closeups



JOHN F. PARSONS

Ames was just an open field when Jack Parsons arrived at Moffett Field with Ferril Nickle, now Ames Budget Officer, back in January, 1940. After just a little more than eight years at Langley Field, he was placed in charge of the contracting, construction and inspection of the new research laboratory.

A native of Illinois, Mr. Parsons received his engineering training at Stanford University where he took his degree of Bachelor of Arts in Aeronautical Engineering in 1928. He continued his engineering training at Stanford for two additional years and in 1930 was awarded the Degree of Engineer in Aeronautical Engineering.

The ensuing year was devoted to assisting Dr. William F. Durand in editing the six volume classic "Aerodynamic Theory", at Stanford University. Following the completion of these works, Mr. Parsons joined the NACA staff at Langley Field as a Junior Aeronautical Engineer. During his service at Langley, he was a project engineer in the Full-Scale Wind Tunnel and later was placed in charge of the design, construction, calibration and operation of the Langley 19-Foot Pressure Wind Tunnel.

When preparations for the establishment of the Ames Laboratory were begun, Mr. Parsons was transferred to the new location. In 1943, he was appointed Chief of the Full-Scale and Flight Research Division, supervising all aerodynamic research in the 40-Foot 80-Foot Full Scale Wind Tunnel Section, the Flight-Research Section, and the Flight Engineering

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Reporters: NASA employees

Section. During this period he was concurrently Chief of the Construction Division of the Laboratory. From April 1948 to December 1949, Mr. Parsons was Assistant to the Director.

At the end of 1949, when the Unitary Wind-Tunnel Plan Act of 1949 had become law, he was selected to take charge of the wind-tunnel construction program authorized by that legislation. As Chief of this program he reported directly to NACA Headquarters, remaining in this position until March 1956, when the three NACA Unitary Plan Wind Tunnels had been essentially completed and placed in operation.

In 1952 he was selected to become Associate Director of the Ames Aeronautical Laboratory, the position he now holds.

Mr. Parsons is an Associate Fellow of the Institute of the Aeronautical Sciences and a Member of Sigma Xi. With Ralph F. Huntsberger, he is co-author of a paper on "The Design of Large High-Speed Wind Tunnels", which he presented at the Seminar on Wind Tunnel Techniques and Aerodynamics held at the Royal Institute of Technology, Stockholm, Sweden, in May 1954.

When he isn't engaged in his Ames activities, Mr. Parsons says he enjoys travelling, having toured most of the Pacific northwest, Arizona, and California. He also adds that when he and Mrs. Parsons are home at 808 Northampton Drive, Palo Alto, you may find him engaged in his second pastime of gardening (in small doses), or perhaps just basking in the California sunshine (on a much larger scale). The Parsons are the parents of two sons and a daughter. The boys are currently in junior high school, while their daughter is a co-ed at the University of Arizona.

## Astroventuring...

★ with walt krumm

Mercury, the first of the planets in distance from the sun (see table in Vol. 1, No. 10, of the Astrogram), is also the most elusive. As an "inner" planet (between us and the sun) it never strays far from the blinding light of the sun. It swings back and forth about the sun in 116 days (its synodic period) with maximum elongation varying from  $18^{\circ}$  to  $28^{\circ}$  depending whether elongation occurs at perihelion or aphelion. This makes the planet hard to see unless one knows where and when to look although it often appears brighter than any of the stars except Sirius.

It seems unlikely that we would enjoy visiting Mercury. First, we are led to believe we would find no atmosphere from both observational data and theoretical calculations. Second, we would encounter extreme temperatures from  $770^{\circ}\text{F}$  to  $-400^{\circ}\text{F}$ . Mercury rotates on its axis in its revolution about the sun to keep one side always toward the sun. As this side receives  $6\frac{2}{3}$  times the solar radiation per unit area received by the earth, temperatures sufficient to melt lead prevail. On the dark side, in the perpetual night, temperatures drop to almost absolute zero. However, seasons of a sort exist because Mercury is  $1\frac{1}{2}$  times as far from the sun in "winter" as in "summer". Also, librations amount to  $23.7^{\circ}$  of Mercury's mean orientation so that the sun would never set above  $132.6^{\circ}$  longitude, sometimes sets over two zones  $47.4^{\circ}$  longitude in width, and there is perpetual darkness on the remaining  $132.6^{\circ}$  longitude. Imagine how it would seem to see the sun rise in the east so slowly that in three weeks it would be overhead and then slowly in three weeks set again in the east.

### FILM CLASSICS OFFER "A RUN FOR YOUR MONEY"

The English comedy "A Run for Your Money", starring Alec Guinness, will be the feature attraction of the Film Classics Club at their March 27th presentation. The show starts promptly at 8 p.m. in the Ames Auditorium.



## Abbott Named To New NASA Post

Ira H. Abbott has been appointed to Deputy Director of Aeronautical and Space Research for the NASA. In his announcement of the appointment, Dr. T. Keith Glennan, NASA Administrator, said Abbott will continue to serve as Assistant Director of Research (Aerodynamics and Flight Mechanics), a position he has held since the NASA was established last October.

Abbott joined the NACA in 1929 as a junior aeronautical engineer at Langley. In 1947 he was transferred to NACA Headquarters. Since the establishment of the NASA, he has supervised basic research in fluid mechanics, stability and control, automatic stabilization and control, high speed aerodynamics, and aerodynamics of aircraft, missiles and spacecraft.

Abbott is a member of the Civilian-Military Liaison Committee, and a Fellow of the Institute of the Aeronautical Sciences. From 1957 to 1958 he was the chairman of the wind tunnel panel of NATO's advisory group on aeronautical research and development. He received a Bachelor of Science Degree in Aeronautical Engineering from Massachusetts Institute of Technology in 1929.

(Continued from page 1)

program, Dr. Dryden said, as now scheduled, it will include first, the short range flight of the X-15, followed by orbital flight (Project Mercury), and additional orbital flights of an advanced concept involving several men for several days, and finally, a permanent manned orbital space laboratory.

Dr. Dryden emphasized in his talk that the Research Centers are still of primary interest and are not being ignored. All basic research will continue as in the past, and there will be no splitting of aeronautical from space research. The problems of organization have been of such magnitude that the Research Centers may seem to have been neglected during this period of transition from NACA to NASA. This, he assures us, however, is not the case.

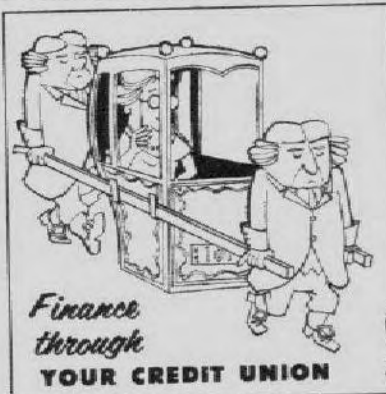
Before coming to Ames, Dr. Dryden spoke at the Western Space Age Conference held in Los Angeles on Thursday, March 5.

## DE FRANCE AND BIOLETTI ATTEND SYMPOSIUM

Dr. Smith J. DeFrance, Director of Ames, and Carlton Bioletti, of the High Speed Research Division, recently attended the "27th Shock and Vibration Symposium", sponsored by the Department of Defense. The meeting was held at the U. S. Army Air Defense Center, Fort Bliss, El Paso, Texas, February 25 through 27.

On February 27, Dr. DeFrance was chairman of a session devoted to re-entry simulation. During this session, Mr. Bioletti presented a paper on "An Atmosphere Entry Simulator".

The symposium was attended by 667 participants from aircraft industries, government departments, and the military.



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## Spring Recruiting Comp

Ames' recruiters returned last week from the final recruiting tour to colleges and universities scheduled for this spring. Interest in the NASA has increased considerably, resulting in a fairly heavy turnout.

Vic Stevens and Ben Beam covered the northwest, Bill Kerwin Fred Demele the midwest, Lloyd Jones and Rod Peery the Rocky Mountain area, and Brad Wick Dave Fisher the southwest. Bill Davy, Dave Reese, Bonne Look Fred Hansen, and John Foster visited California schools with Dave Fisher joining in on his return to the southwest.

The success of this year's recruiting efforts will not be known until all applications have been received, offers made and accepted. However, a large number of applications is anticipated.

## MOUNTAIN VIEW RECREATION DEPARTMENT ORGANIZES FOR 1959 SOFTBALL SEASON

The softball season is near again, and the Mountain View Recreation Department is scheduling its Managers Organizational meeting for Thursday night, March 19, 7:30 p.m., at the Recreation Department Office located at 15 Moffett Blvd., Mt. View.

Business items to be discussed include rules and regulations, of leagues, entry fees, game and starting times, setting of dates, deadlines, field reservations for practice, umpires, and an election of Board of Directors.

This will be the only such meeting to be held this year, and interested parties should attend to insure their teams' entrances.

## ARTICLE BY CARR NEEL IN "SPACE AERONAUTICS"

An article by Carr B. Neel, the Low Density and Heat Transfer Branch, is featured in the March issue of "Space Aeronautics". Based on his presentation to the Structures and Materials Panel of the Advisory Group for Aeronautical Research and Development at Copenhagen, Denmark, last October, the article is concerned with "Cooling of Structures in High-Speed Flight".



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

APRIL 2, 1959

NUMBER 12

## Progress Report On Project Mercury

Significant progress has been made to date in four general areas of Project Mercury, NASA Headquarters has announced.

"Air Drops", the terminal phase of the Project Mercury flight involving the safe recovery after the capsule re-enters the atmosphere, have been conducted at Langley Research Center where full-scale two-ton models are loaded on a C-130 Hercules transport and dropped into a free fall. The descent is photographed by two T-33 chase planes. One aircraft is stationed at the same altitude as the C-130, and the other at the altitude where the recovery parachute is to be deployed. When the capsule impacts in the water, two helicopters and a crash boat go to the spot. One helicopter, directed by the other and by the crash boat, retrieves the capsule by shackling a line to an eye located on top of the test model.

Detailed studies of the entire operation are made from the motion picture films taken by the T-33 jets.

"Escape Tests" are being conducted from the Wallops Island site. When the capsule is launched, it will have a pylon-like arrangement tipped with an escape rocket system. If the booster malfunctions at any time from pad to staging, an escape rocket is triggered, and it will carry the capsule and its occupant away from the booster. Normal recovery by parachute then takes place. With use of full-scale models, scientists are determining proper alignment of escape rocket nozzles as well as dynamic forces on the capsule and escape arrangement during launch and descent.

The "Model Program" is being studied at Ames and Langley and soon at the Arnold Engineering

(Continued on page 4)



LT. COLONEL  
WILLIAM W. PENN

Major William W. Penn, Chief of the Air Research and Development Command Liaison Office at Ames, became Lt. Colonel Penn last month. Colonel Penn, a member of the Air Force since January 1942, came to Ames March 18, 1955. He is scheduled for reassignment to the Design Cri-

(Continued on Page 4)

## Planes Arrive At Ames For Flight Studies



The overstuffed plane pictured above is the C134 Pantobase which recently arrived here to undergo a series of Boundary Layer Control studies. Designed to land on anything -- land, snow, water -- this plane is equipped with a jet engine within the fuselage for the current tests, which will be an extension of general BLC studies done here in the past.



This F-104A arrived at Ames last month to take part in a study of the problems involved in landing high performance planes such as the X-15. Current plans call for in-flight studies. Wind tunnel tests of this plane were conducted previously in the 40- by 80-Foot, and included Boundary Layer Control studies.



## Astroventuring... ★ with walt krumm

### VENUS

The familiar morning and evening "star" is the brightest of all the planets. It outshines everything in the sky except the sun and the moon. As a morning "star" it was called Hesperus by the ancients and as an evening "star", Lucifer. Venus, the second planet in distance from the sun (see Table in Astrogram, Vol. 1, No. 10) is at times the closest planet to the earth and has been called the earth's twin sister though the similarity ends at the name.

Venus exhibits phases, as does the moon, from full (when it is farthest from us - across the sun - at superior conjunction) to a very thin crescent or even a circle (when it is between us and the sun - at inferior conjunction). Because of the apparent diameter change with distance, Venus appears brightest when it resembles a 2-day moon. Even with a small telescope one may see these phases and they are interesting to watch. (Note: Mercury also exhibits phases but was not mentioned in the last issue; they are so difficult to see.)

Only a skilled observer is able to see any markings on Venus as these are indistinct and impermanent. Some experiments even prove these markings to be an illusion on the cloud covered planet. The presence of a dense atmosphere is shown in several ways. At or near inferior conjunction (when Venus is between us and the sun) the horns of the crescent extend over half way around the planet and sometimes even form a circle. When Venus transits (crosses) the sun, the planet itself appears much smaller than when seen against a background of sky. Subtracting the size of the transit image from the sky image gives us a depth for the cloud cover. No one has ever seen the surface of the planet because of this cloud cover so we can only speculate what the planet is like.

The composition of the atmosphere of Venus indicates an abundance of carbon dioxide but little oxygen or water vapor. The more intense sunlight, because Venus is nearer the sun than the earth, and the more effective cloud covering

## GOLF

### ON THE TEE....

The Ames Golf Club toured the scenic Almaden Golf Course for the season's first best-ball tournament. Frank Lazzeroni and Ernie Muselman came through with a best-ball score of 64 to win the first flight match. Winners of the second flight, and with the same score, were Howard Mathews and Thomas Canning. Merchandise orders at Spiro's were awarded to the lucky winners. Golf balls were awarded to second and third place in each flight.

#### FIRST FLIGHT

	Gross	Hndp	Net	Best Ball
F. Lazzeroni	78	10	68	64
E. Muselman	86	14	72	
C. Fitzmaurice	86	10	76	65
F. Pfyl	87	14	73	
O. Meckler	81	8	73	66
L. Bright	92	16	76	
C. Wagoner	80	8	72	66
B. Beam	91	16	75	
R. Griffin	86	10	76	68
V. Fietzer	91	15	76	

#### SECOND FLIGHT

	Gross	Hndp	Net	Best Ball
H. Mathews	85	17	68	64
T. Canning	105	25	80	
G. White	89	19	70	67
J. Wyss	94	21	73	
B. Tinling	92	16	76	68
R. Dannenberg	113	35	78	
T. Smith	94	19	75	70
A. Lopez	100	21	79	
J. Nelan	92	17	75	71
C. McFadden	102	26	76	
T. Plum	101	21	80	71

The next tournament will be at Riverside on April 25. Those desiring to participate should contact Mitch Radovich, ext. 232, who reminds members that this year's dues are overdue!

may keep the planet at 120° or 140°F. or even boiling hot at the surface.

Spectroscopic studies of Venus fail to show any rotation period so we do not know the length of day on the planet. Could be that only space travel to Venus will answer the multitude of questions that still remain.

### LIST OF SOIREE EXHIBITORS GROWS

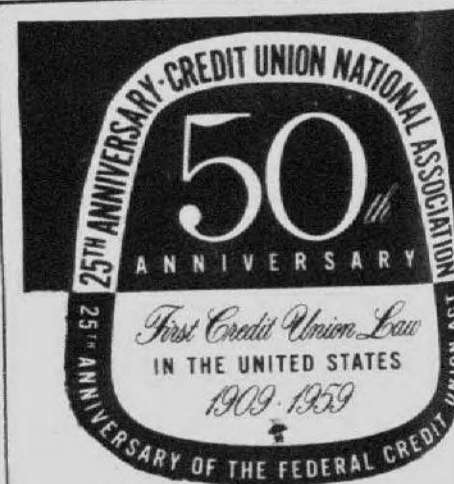
The number of exhibitors scheduled to take part in the Ames May Day Soiree, scheduled for Friday evening, May 1, in the auditorium and cafeteria, continues to grow.

Twenty-seven booths have been allotted to date with 17 more available. Over 40 exhibitors have signed up, and the Ames Entertainment Committee hopes to have at least 20 more sign up.

The Committee would like entries in the fields of skin diving equipment, needlepoint, model trains, sports cars, lapidary, rocks, archery, furniture, flag pole sitting, fishing equipment, hunting equipment, folk dancing, stamp collecting.

Prospective participants are urged to send in their Exhibitor reservation forms, or call their division representative or Hy Zimmer, 363.

Remember the time -- 7 to 9 p.m. on May 1st. Children under 16 free, adults 50¢. Tickets will be available shortly.



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## Ames Closeups



ALBERTA ALKSNE

Few of Ames Aeronautical Research Scientists are grandmothers. Even fewer are grandmothers who are ardent ski enthusiasts and listed in Who's Who in American Women. In fact, you can narrow the list down to just about one -- Alberta Alksne, of the Theoretical Aerodynamics Branch.

Alberta came to Ames from the Navy in San Francisco in 1943 as a computer. Originally from Illinois, she attended Stanford University, receiving a BA in mathematics, and lived in San Francisco and Marin County before moving down to the Peninsula.

Alberta didn't begin her career until World War II, when her husband joined the Air Force. Starting as a computer, she advanced to the Aeronautical Research Scientist position she now holds. Following the death of her husband, who was killed in a plane crash while prospecting for uranium, she established an engineering scholarship in his name at San Jose State College.

Two years ago, she joined Doris Jones, wife of R. T. Jones of Theoretical Aerodynamics, on a tour of Europe visiting Aeronautical Laboratories in England, France, Switzerland, Germany and Sweden. On the tour of Germany they met Dr. K. Oswatitsch, of Aachen, who was a visitor at Ames last month. The trip lasted four weeks.

Alberta is a member of the Institute of Aeronautical Sciences and is secretary of the Peninsula Astronomical Society. The latter organization includes many Ames engineers and meets monthly to hear talks by members and outside

speakers on a variety of subjects related to astronomy. Alberta invites any and all "space bound" scientists to join the organization.

Has she been skiing lately? Well, no. She is making plans for next season, but this year she has been strengthening the muscles in her knees which were injured in a skiing mishap last season.

About being a grandmother, Alberta has one grandson living with his parents in North Carolina where his father is serving his surgical internship. Here, near her Eichler home (with swimming pool) in Barron Park, live three more grandsons. And is she considering retirement? Certainly not! She likes her work here and plans to stay with it "until they kick me out!"

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, --phone 385. Deadline: Thursday between publication dates.

Editor: B. P. Wilson

Reporters: NASA Employees

### WILL STORK PARALYZE PERSONNEL OPERATION?

With the announcement last month by Lorraine Vernon, Placement Officer at Ames for the past 11 years, that she was expecting her first little bundle of joy this fall, the Personnel office was startled. On the heels of this proclamation comes the announcement by Mary Lou Flattley, the bulwark of classification, that she is joining Lorraine in smug anticipation of her second blessed event.

This has caused Helen Davies, Personnel Officer, to eye her remaining stalwarts speculatively. For Miss Davies' sake, it would be unwise for any of them to approach her casually one morning and say "Guess What?"

### GLENN MILLER STORY FINAL FILM CLASSIC

The "Glenn Miller Story", final Film Classic offering of the current season, will be presented Friday night, April 10, at 8 p.m. at the Ames Auditorium. The picture stars James Stewart, June Allyson, Louis Armstrong, Gene Krupa and Frances Langford.



TO BE ON DISPLAY AT AMES' SOIREE....

Derrill Hansen, of the Construction Engineering Branch, will display his sail plane, pictured above, at the Ames May Day Soiree. Derrill usually sails his glider from the Hummingbird Haven Glider Port east of Livermore, using a plane to tow him high into the blue. The Glider Port is operated by the Northern California Soaring Association. At some of the other ports a car tow is also used. The glider is just one of many interesting exhibits to be featured at the Soiree.



## WANT ADS

For Sale--Pistol, S & W K-22 Combat Masterpiece with holster and belt. Like new, \$60. Custom trailer hitch for 55-56 Mercury. \$5. Norm Sorenson, ext. 247.

For Sale-- .22 caliber pistol. Hi-Standard, Model H-D, military. \$45. Excellent condition. M. Koppel, ext. 247, or YO 8-3586.

For Sale--Foam rubber mattress and box spring. Double size. Call Magarian, ext. 221.

For Sale--Westinghouse electric range. Excellent condition. Four top burners, large oven plus warmer cabinet. Sell for best offer over \$75. Call Ernie Hedstrom, ext. 252; after 5 p.m. AX 6-2844.

For Rent--Newly painted 3-bedroom, 2-bath home. W/W carpet, drapes, stove and refrigerator. Corner lot near Lawrence Station Road & Bayshore. \$130 a month w/lease. Call Mrs. Stothard, ext. 337 or RE 6-5579.

### Project Mercury....

(Continued from page 1)

Development Center, Tullahoma, Tennessee. At Ames the 9- by 7-Foot, 8- by 7-Foot, 10- by 14-Inch Supersonic Wind Tunnels, the 14-Foot Transonic Wind Tunnel, the Supersonic Free Flight Wind Tunnel, and the Pilot Gun Tunnel are being used to study panel flutter, pressures and heat transfer, static and dynamic stability, plus lift and drag in the Mach 0.6 (390 mph) to Mach 15.3 (9,950 mph) range.

"Impact Tests" are currently being conducted at Langley's facilities. On descent, the capsule will fall with a velocity of 30 feet per second. Drop tests at this velocity in water tanks have shown that a safe water re-entry can be made with the presently-shaped leading face on the capsule. In the event of a ground landing, scientists are conducting studies into a crushable material which can absorb the landing shock. Materials now under study include honeycombed arrangements of corrugated plastic and aluminum, as well as the more fibrous cellulose materials. In these tests, scientists are dropping instrumented models in water tanks and on hard surfaces from all impact angles, using a variety of material and arrangements.



FORMER "TINKER BELL"

WED MARCH 15

Peggy Sue Dressel, of the 10- by 14-Inch Supersonic Wind Tunnel, who was Ames "Miss Tinker Bell" of 1957, was wed Sunday, March 15, at 2 p.m., at the Church of the Valley in Santa Clara to Bruce G. Larson of the Instrument Research Branch. A reception was held in the church hall following the ceremony. After a honeymoon spent in Monterey, Carmel and San Francisco, the couple now resides at 1030 West Olive, Sunnyvale.

## BOWLING

### TEAMS ORGANIZE FOR SUMMER SEASON

The Astrogram has received a communication from Bob Tinkey, of the Aircraft Modification Branch, noting that bowling teams are now being organized for the summer season.

Tinkey, President of the All Ames Bowling League, announces that the league is open to both men and women, and Ames personnel can bring wives, husbands, boy friends, girl friends -- even next of kin!

Sixteen lanes have been scheduled for Ames on Thursday nights at 6:45 at the Sunnyvale Bowl. Captains of last year's teams are asked to enter the names of the members of their teams for the coming season with Robert Tinkey, Aircraft Modification Branch, by mail, as soon as possible. Anyone wishing to organize a new team may send in five names to Tinkey, also.

There will be a meeting of all team captains and past officers before bowling starts early next month. The exact date has not been set as yet.

### VISITOR AT AMES

Dr. Isamu Wada, of the National Aeronautical Laboratories of Japan, was a guest of Russell G. Robinson, Assistant Director, and John Spreiter, Theoretical Aerodynamics Branch, at Ames on Thursday, March 12.

### HAVE YOU TOLD PERSONNEL

Under our new Merit Promotion Program each employee has an obligation to meet. It is absolutely essential that the employee keep his employment record up to date, making certain that all information about job-related post-employment education, experience or training is shown.

Keep informed about policies and procedures concerning the program. If you have any questions, seek the advice and assistance of your supervisor or the Personnel staff.

### Lt. Col. Penn....

(Continued from Page 1)

teria Division in the Directorate of Engineering at Headquarters ARDC, on July 15, this year.

Colonel Penn worked at Langley Aeronautical Laboratory of the NACA shortly after the war. He is a very active member of the Moffett Field Toastmasters Club, a member of the Baptist choir, President of the Green Meadows Community Association in Palo Alto, and takes an active part as a camp councilor each summer.

The Penns have two girls, two boys and plan to retire someday to Mobile Bay where they have already purchased property.

Regarding his assignment to Ames, Colonel Penn states that it is the finest assignment he has received in the Air Force, and will sincerely miss his many friends here upon his reassignment this summer.



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

APRIL 16, 1959

NUMBER 13

## Working Groups Formed

NASA Headquarters has announced that the first two space sciences working groups have been formed, and 13 government university and industrial scientists have accepted memberships on them.

Organization of a number of such NASA groups was announced last month when it was noted that the purpose of the working units would be to follow through on experiments in correlating research projects in future satellite and space probe payloads. The program is under the direction of Dr. Homer E. Newell, Jr., NASA Assistant Director for Space Sciences.

Working groups whose initial memberships have been completed are:

Orbiting Astronomical Observatories, to be headed by Dr. Nancy Roman of the NASA Office of Space Sciences.

Satellite Ionospheric Beacons, with J. C. Seddon of the NASA Space Projects Center, Beltsville, Maryland, as chairman.

Dr. Abe Silverstein, Director of NASA Space Flight Development, said working groups on Interplanetary Probes and Lunar Explorations also are in the process of formation. As specific needs arise, additional working groups will be established.

Dr. Hugh L. Dryden, Deputy NASA Administrator, explained that the working groups will be involved in relatively long range projects. Dr. Roman's group has as its purpose exploration of X-ray ultraviolet and infrared regions of the electromagnetic spectrum of the sun, stars and nebulae.

Objective of the satellite ionospheric beacons working group is to study distribution of electrically charged particles and electron concentration in the ionosphere, Dr. Dryden said.

To Be Exhibited at Soiree



Helen Shapero (wife of Chet Shapero, of Wind Tunnel Instrument Research) pursues her art of sculpturing as she creates a head of her son, Danny, in sculptor's clay. Helen has been sculpturing for over two years, has been in other art work for over 10 years. Her work will be exhibited at the forthcoming May Day Soiree.

### LIST OF SOIREE EXHIBITORS CONTINUES TO GROW!

Exhibitors are still signing up for the May Day Soiree, scheduled for Friday evening, May 1, in the auditorium and cafeteria.

To date, the following exhibits have been scheduled:

Wood Carving:	Victor Hugo
Plastic Arts:	Albert Clark
Antique Cars:	Ralph Igler
Row Boats:	Art Williams
Stereo Slides:	Samuel Kraus and James Swain
Dogs, all breeds:	Evelyn Harper and Milton Evans
Match Books:	Richard Tate
Sculpture:	Helen Shapero (wife of Chet Shapero)
Water Color:	Mary Thompson & Pearl Pappas
Fire Arms:	Sid Copeland & Henry Citti
Salon Prints:	Alice Plaisted
Radio Controlled	
Model Plane:	William Page

(Continued on page 4)

## Buckley Named To New Post

Edmond C. Buckley, former Chief of the Instrument Research Division of the Langley Research Center, has been appointed Assistant Director for Space Flight Operations at NASA Headquarters.

Reporting to the Director of Space Flight Development, Buckley is responsible for planning and directing the use of support systems for space research activities, including global tracking stations, data acquisition systems and networks, ground communications networks, and launch site facilities.

A graduate of Rensselaer Polytechnic Institute with a degree in Electrical Engineering, Buckley joined the NACA at Langley in 1930. In 1943 he was named Chief of the Instrument Research Division. He is a member of the Instrument Society of America and is on the steering committee of the Inter-range Instrument Group.

### DR. EGGERS IN EUROPE

Dr. Alfred J. Eggers, Chief of the 10- by 14-Inch Supersonic Wind Tunnel Branch, left April 4 for Bristol, England, where he delivered a paper on "Some Considerations of Aircraft Configurations Suitable for Long Range Hypersonic Flight" at the Symposium on Hypersonic Flow sponsored by the Colston Research Society of the University of Bristol.

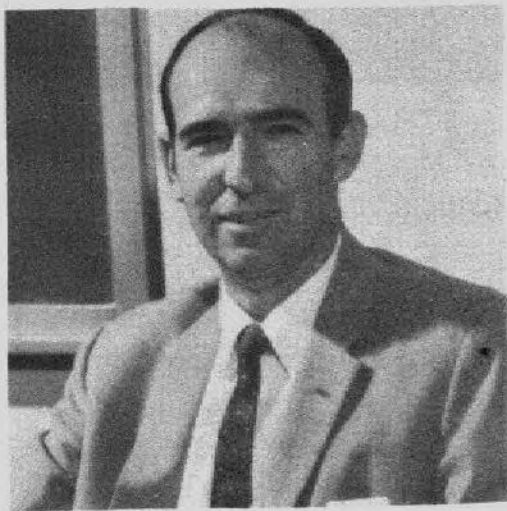
Dr. Eggers will also visit London, Paris and Dusseldorf, touring various research facilities, and will return home on April 17.

### VISITOR AT AMES

Dr. Robert Jastrow, Chief of the Theoretical Division of NASA's Beltsville Space Center, visited Ames on Tuesday, April 7. Members of the professional research staff were invited to hear Dr. Jastrow speak in the auditorium on "Major Results of the Satellite Program".



## Ames Closeups



BRAD WICK

When he is not recruiting in the southwest, fishing or camping in

the High Sierra, or being our good will ambassador to Mexico, Brad Wick occupies his time as Chief of the Fluid Mechanics Branch. Considered an "old timer" at Ames, Brad came here upon graduation from the University of California with a degree of Bachelor of Science in Mechanical Engineering in May, 1942, and was assigned to the 7- by 10-Foot Tunnel. Working under Bill Harper, his first project was testing a Douglas SB2-D.

Six months after the 40- by 80 Foot Wind Tunnel opened, Brad was transferred to it. Since then he served also in the 2- by 2-Foot Tunnel before assuming his present duties.

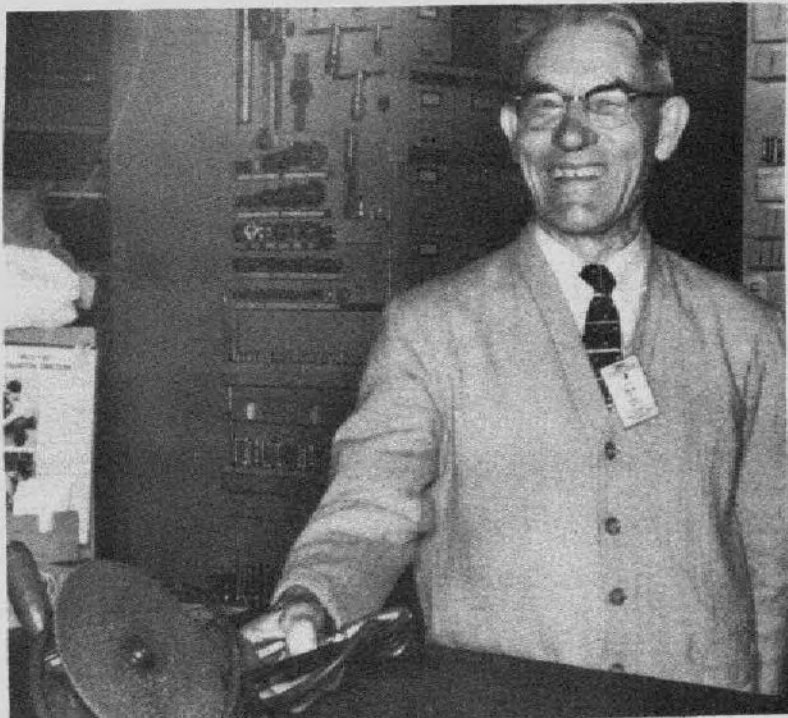
A native of Bay City, Texas, Brad says he immigrated to the United States before he was old enough to have acquired "foreign"

mannerisms associated with that area.

Currently residents of Los Altos, the Wicks have 4 daughters who take an enthusiastic part in camping and fishing excursions. More recently, the Wicks have been taking lengthy trips. Brad, who has been one of Ames' most active recruiters since the fall of 1954, when he made his first trip to the southwest, took his family along on recruiting expeditions for three years consecutively, visiting Arizona, New Mexico, and Texas (where he's not even recognized any more). This year however, they took a four-week vacation at Christmas time and toured Mexico.

Driving from Nogales to Mexico City in their own car, they found the highway in good condition, but hard on the nerves.

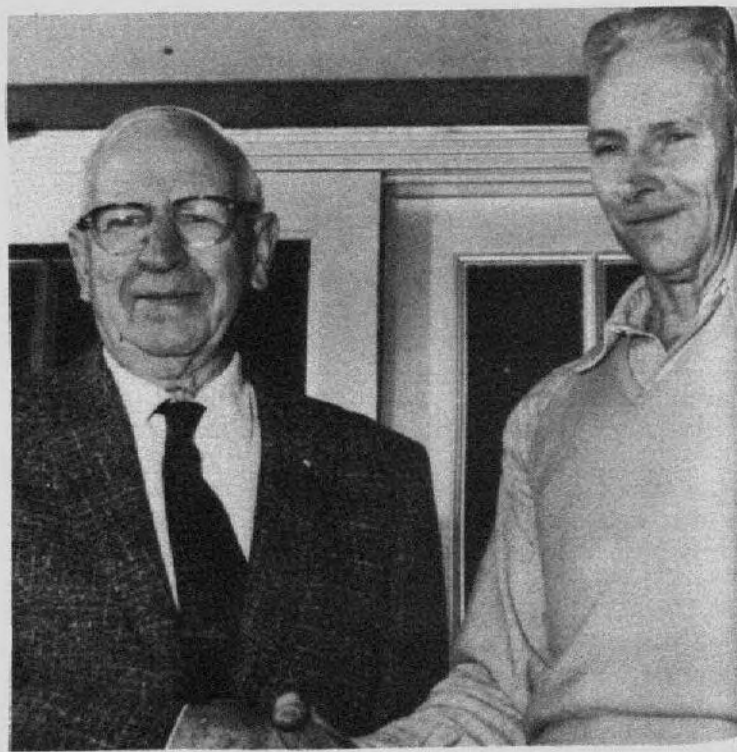
## Retiring....



Orville Lacy, of the Electrical Branch, retired from Ames on Friday, April 3, at 68, after completing almost 17 years of service at this Center. A native of Mayview, Missouri, he came to California with his family in 1900. Marrying in San Jose in 1919, he and his wife moved to Stockton where they lived for 22 years, returning to San Jose in 1942. Shortly thereafter, Orville came to work at Ames in the maintenance section of the Electrical Branch, being transferred to the Tool Room about five years later where he has continued until his retirement.

Orville's daughter, Lois, now Mrs. Ralph Householder, was an employee of the Personnel Branch at Ames when he came to work here. Their only child, she now resides with her husband and the Lacy's five grandchildren in Castro Valley.

Having lived in Los Gatos and Santa Clara the past few years, the Lacys have now decided that their address on retirement will be Santa Cruz -- 114 Colorado Street. A dinner party will be held at the Jamaica Inn, Sunnyvale, on May 23, to honor both Orville Lacy and Jack Hall, who is also retiring in May. (See adjoining story.)



Pictured above are Jack Hall (left) and Dan Wallace, of the Electrical Branch. Jack is retiring from Ames on May 29 at the age of 77 after having completed 15 years of service. Wallace says, "Jack Hall is one of the most remarkable, thorough and continuously active men I've ever known," a fact which is borne out by Jack's plans for "retirement". He has already purchased a motel which he and his wife plan to run at Pine Flat Lake, about 35 miles east of Fresno on the north fork of Kings River.

Jack, who had been a widower, married his late wife, Lefa, herself a widow, when he was but 75, many Ames employees will recall. A native of Lexington, Kentucky, he has traveled extensively, working in Hawaii for 12 years, Japan, the Philippines, Singapore, India, and various other areas.

When asked to comment on his remarkable health and years of productivity, Jack replied, "Well, I've never smoked, drink only an occasional friendly highball, and always keep busy!"

Those interested in attending the dinner in honor of Jack's and Orville Lacy's retirement (see adjoining story) should contact Marty Margolis, ext. 211, prior to April 30. The dinner will be held at Jamaica Inn.



## Astroventuring...

★ with walt krumm

### EARTH

The next planet - the Earth - is third in order from the sun (see Astrogram Vol. I, No. 10).

Little need be said about the Earth; but because of its proximity (we're standing on it) we know more about it than any of the other planets, and we could ramble on and on for pages and tell nothing you did not know already.

The ancients supposed the Earth to be the center of our universe and even thought it flat. We

know this is not true for one can see a circular shadow on the moon when the Earth eclipses the sun, or we watch a ship disappear over the horizon much before it is too small to disappear from sight, or (in recent years) a photograph taken from a rocket shows an unmistakably curved horizon. Copernicus figured that our Earth was not at the center of things and established the heliocentric (sun at the center) system we now know to be true. The initial step to prove these to be true is a series of planetary observations. Tycho Brahe spent his lifetime making the most ex-

(Continued on Page 4)

### MOFFETT FIELD EMPLOYEES CREDIT UNION

## Celebrates Second Anniversary

Yes, tomorrow is the second anniversary of our Credit Union. If you are not a member, why not investigate the possibility of joining now!

### WHAT IS A CREDIT UNION?

Basically, credit unions are cooperative, do-it-yourself savings and loan organizations designed to provide employees the opportunity to help each other in savings and lending problems. You run your own credit union. You determine the rate of interest as well as the dividends. You make the policy.



### HOW IS YOUR MONEY PROTECTED?

Your Credit Union is chartered and supervised by the State. Their examiners review its operation regularly. The people who handle your money and records are bonded. The law requires a percentage of each year's earnings to be put into reserves. The credit union makes personal loans (the limits are set by law), and any cash not required for daily operations is deposited in a local bank. Your supervisory committee audits the accounts and records using outside auditors when help is desired.

### INSURED ACCOUNTS & LOANS

Insurance, an added feature of your credit union, is free of charge to all members. In the event of death, it matches your savings account dollar for dollar, or pays your loan in full. This insurance is backed by CUNA Mutual Insurance Society. In 1958, CUNA paid dividends of over 5½ million dollars, which means that your credit union will receive a dividend of 15% on loan protection and 23% on life savings.

### WHO CAN JOIN?

Every civilian government employee is eligible to join. For information, contact the Credit Union Office between 11:45 a. m. and 12:30 noon, or 4:00 p. m. and 4:45 p. m., in Bldg. 62, Navy side. Phone ext. 309, or write Moffett Field Employees Credit Union, Moffett Field, California, whichever is more convenient. It takes only \$1, plus \$5 for your first share, to become a member of this organization. Your officers and cashiers will welcome you!

### HATS OFF DEPARTMENT

A big hand of praise is due your officers and members who have worked so diligently, without compensation, to keep the ball rolling. They have given freely of their time to each member's financial problems presented to them so that you may have a prosperous credit union.

E. Gish	H. Mathews	D. Shute	M. Halverson	B. Hammer
B. Beach	R. Bouffard	M. Flowers	V. Balaam	B. Shoemaker
A. Bondi	B. Rodebaugh	J. Robinson	G. Baker	D. Moody

Occasional signs warned motorists to beware of cattle on the road. The cattle were there, too, darting out of the brush and startling unwary drivers from their seats. No shoulders on the roads meant that when cars broke down (which is frequent in Mexico) they were left in the lane of traffic, and to stay alert was to stay alive! To drive at night was out of the question. Brad did it, but only once! They drove from Nogales to Guaymas and then down the coast of the Gulf of California, turning inland only as they approached Mexico City. In Guaymas they encountered a Santa Claus parade with Santa riding on top of a Pepsi-Cola truck. Brad got him to wave, took his picture, and yelled, "Gracias". Santa yelled back, "Gracias, me too!"

After Guaymas, they spent several days on the beautiful beaches of Mazatlan, and then on to San Blas, a sleepy fishing village set in beautiful rolling hills densely covered with tropical vegetation. Here they took a three-hour boat trip up river through the jungle to a banana plantation, saw orchids growing in the trees, brightly-plumed birds in flight, alligators and orange-colored crabs in the water, and - at the plantation - many big trout. About this time, Brad said, he felt like kicking himself for not bringing his fishing gear on the trip.

In Morelia, the Wicks were invited to a posada in a private home. The festivities included the breaking of several piñatas (decorated clay jars filled with candy, nuts, fruit, balloons, and confetti). The children try to hit the piñata, which is suspended from an overhead beam, with a long stick. The height of the piñata is adjusted by a priest who raises and lowers the rope (which also causes the jar to swing). Of course the children are blindfolded! Brad's girls, Kris and Jan, both scored hits, but did not break the piñata. However, Jan succeeded in scoring two near hits on the priest.

Before leaving on their tour, Brad carefully studied his Spanish and practiced essential words and phrases. By the time they arrived in Mexico City, he felt quite confident. However, his confidence was shattered when they entered a restaurant and he asked the waitress where the rest room was in his polished Spanish. Answering him in English, she said, "Oh, yes, señor, we serve delectable hamburgers here." So Brad shrugged his shoulders and had a hamburger!



## WANT ADS

For Sale--1951 Studebaker V-8 Starlight Coupe with automatic transmission, climatizer and radio, \$295. Call Sybil F. Heaton, ext. 267.

For Sale--Modern RCA Victor radio-phonograph. Beautiful mahogany cabinet 3 feet high, about 30 inches wide; record compartments, 3-speed record changer, front opening doors, excellent speaker, new tubes. Price \$75. Call secretary at 12-Foot, ext. 288.

For Sale--3 bedroom home. W/W carpets, hwd floors, fireplace, fenced yard, 3 blocks to school & shopping, in Sunnyvale. \$13,500. \$1000 to \$1200 down. Call Don Moody, ext. 230, or RE 6-5393.

For Sale--1958 Rambler Sta Wag, 4-dr, blue, radio, htr, standard shift. Phone ALpine 2-3267 after 5 o'clock.

Wanted--Ride from 1054 S. Genevieve Lane (vicinity Moorpark & Winchester Road), San Jose. 8 to 4:30 shift. Phone ext. 385, Mildred Warren.

Wanted--Cashier to begin work April 20. Contact Ray Loucks, Cafeteria Supervisor, for details. Ext. 249.

Large room for rent--1301 Bryant, Corner of Embarcadero, P. A. Available now. \$40. Phone Davenport 6-5629.

Wanted--Mature housekeeper. Care for 2 children, school age. Room, board, and small salary. Phone ext. 275 or 324, Gloria Crow.

### ASTROVENTURING....

(Continued from Page 3)

tensive and accurate observations. Johannes Kepler inherited these observations and condensed the results to the three laws of planetary motion.

If we viewed the Earth from Venus, we would see the Earth and moon as a "double planet", the only one to be seen as such in this solar system. The Earth would appear as a blue-green planet about twice as bright as Venus appears to us. The moon would seem to swing from side to side in the course of a month, and we could watch the rotation of the



MARION ROWAN WEDS  
DICK HODGE

Marion Rowan of the 10- by 14-, was wed to Dick Hodge on Saturday, March 21, at the Presbyterian Church in Los Gatos. A reception was held at the home of Mrs. Betty Cady, sister of the bride, in Sunnyvale.

The couple honeymooned in Las Vegas before returning to their new home at 17231 Trothers Road, San Jose. The groom is teaching and attending San Jose State College.

### SOIREE... (Continued from Page 1)

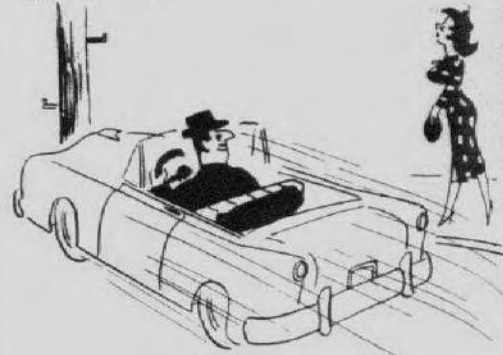
Wine Bottles & Labels:	Vickey Harper
Restaurant Menus:	Ruth Zimmer (wife of Hy Zimmer)
Stereo Photo Equipment:	Jim Swain, Vernon Nicholson & Sam Kraus
Ham Station:	Lonnie Phillips & James Gyson
Hi-Fi & Stereo:	Charles Nagy & Guy Wong
Ski Boats:	Leslie Videll
Motorized Crane-1/2' to 1' scale:	R. W. Eglington
Fishing:	Don and Clair Humpal
Antique Photo Equipment:	Emerson Shaw
Furniture:	Art Williams
Handcrafted Jewelry:	Ben Mayo

In addition, there will be an astronomical exhibit and 35 mm slide exhibit.

Earth very nicely. But we are not Venusians so we must resort to less direct but equally conclusive demonstrations of these facts.

S'enough said (I told you we could ramble on and on) except perhaps that the Earth is the only known planet to have land and seas and to have the combination of atmosphere and temperature to support life as we know it

## YOU'RE NEVER TOO OLD TO LOOK



Have you ever considered how valuable your eyes are not only in your everyday activities and the performance of your job but also in doing the many things we all enjoy? Think about it for a moment...

The Center has thought about it a great deal, and we therefore have made safety glasses, safety goggles, safety shields, and other eye protection equipment available to all those requiring eye protection in the performance of their duties. This equipment for protecting those valuable eyes of yours may be obtained without charge by requesting it from your branch tool crib or supply section. Any eye protection equipment not available and required for a particular job will be procured if possible.

We are greatly concerned with the number of painful eye injuries Ames employees have sustained due to failure to wear the proper eye protection when such equipment is available for the asking, and in most cases has been actually issued to the employees but is not being worn as required. Don't forget -- you may never be too old to look, but to look you must be able to see!

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, --phone 385. Deadline: Thursday between publication dates. Editor: B. P. Wilson



The

# Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

APRIL 30, 1959

NUMBER 14

## Horner To Become NASA Associate Administrator



RICHARD E. HORNER

President Eisenhower has announced the resignation of Richard E. Horner, Assistant Secretary of the Air Force for Research and Development. Mr. Horner is resigning to accept appointment by T. Keith Glennan, NASA Administrator, as Associate Administrator of the NASA, a newly created position. The resignation and appointment will become effective June 1, 1959. Dr. Glennan said the Associate Administrator will be responsible for the general management of NASA's operations. Under the Administrator and Dr. Hugh L. Dryden, Deputy Administrator, he will have responsibility for the effective performance of NASA's far flung operations, which include laboratories, research centers, rocket test and launching facilities, and a world network of tracking stations.

Horner has held his present position since July 8, 1957. Born October 24, 1917, in Wrenshall, Minnesota, he is a graduate of the University of Minnesota, where he received a bachelor of science degree in aeronautical engineering in 1940. He holds a master's degree from Princeton University, 1947.

Horner was a guest at Ames on April 23. He was accompanied by his aide, Colonel Bentley

## Project Mercury Astronauts Announced

The names of the seven men selected as Project Mercury Astronauts were released recently by the NASA in Washington D. C. The group includes Air Force Captains Donald K. Slayton and Leroy G. Cooper; Lt. Malcolm S. Carpenter, Navy; Lt. Col. John H. Glenn, Jr., Marine Corps; Capt. Virgil I. Grissom, Air Force; Lt. Cmdr. Walter M. Schirra and Lt. Cmdr. Alan B. Shepard, Navy. The seven astronauts will be assigned to the Space Task Group at Langley.

Originally scheduled to include twelve men, the group was narrowed to seven in the final selection in order to assure more

complete participation by each in all phases of the Project Mercury development.

One of the seven will be chosen by NASA to be the first American -- possibly the first man -- to be placed in orbital space flight around the earth. The seven selected were picked from an original group of 110 military test pilots. In all the selection steps, evaluation was extremely difficult because of the high caliber and motivation of the candidates. The greater percentage of the Mercury aspirants who were put through selective screening for space flight

(Continued on Page 4)

Dear Friends:

It has been a source of great pleasure to learn of the Entertainment Committee's plans for another soiree in the Ames Auditorium on Friday evening, May 1. Many of you may recall the enthusiastic response accorded the previous soiree.

I cannot imagine a more stimulating and rewarding evening for the members of the Ames staff than to become acquainted with their talented associates and share in their pleasure of demonstrating and exhibiting the fascinating results of their various pursuits.

To those who attended the previous soiree, I know your appreciation will be further heightened by viewing the many new contributions that will be presented.

Those of you who have joined the staff since the previous soiree will make most pleasant discoveries in learning of the diversified interests, skills and creative abilities of these talented members of the Ames staff with whom you share your working days.

I am looking forward to sharing this very special event with you on May 1.

Sincerely,

*Smith J. DeFrance*

Smith J. DeFrance,  
Director



## Soiree Scheduled Tomorrow Night

Final arrangements have been made for the Ames May Day Soiree set to open tomorrow night, Friday, May 1, at 7 p. m., in the auditorium and cafeteria. The four-hour exhibit will give fight fans time to see their favorite boxing match and still get down to the Ames auditorium in time to see the many rare arts and crafts exhibits. The show should prove of exceptional interest to teenagers and their friends as well as to older members of the family.

Sponsored by the Ames Entertainment Committee, the Soiree may provide the only opportunity Ames employees and their friends may ever have of seeing the outstanding and unique displays to be featured this year such as cameo carving, wood carving, steam engines, the exceptional weapons exhibit, just to mention a few. A late entry not mentioned in the last issue is the Stamps of France Exhibit, which won the top award at the San Jose Philatelic Exhibition, to be presented by Margaret Krumm, daughter of Walt Krumm (14-Foot). There will be a 35 mm slide exhibit, of interest to all, and an astronomical exhibit, guaranteed to be one of the highlights of the Soiree. All these, and many more exciting features, will be presented.

Men -- be sure to tell your wives! Bring the children. Bring friends. All are welcome, provided there is at least one Ames employee in each group. It is a rare opportunity at a limited cost. Children up to 16 are free! Admission for adults is just 50¢. Be sure to attend for an exciting and entertaining evening!

### HAYDN'S "THE CREATION" TO BE SUNG MAY 4 IN SAN JOSE

Haydn's "The Creation" will be sung by the San Jose Municipal Chorus Monday night, May 4, at 8:15, in the Scottish Rite Temple in San Jose. LeRoy V. Brant will conduct.

More than 100 selected voices will make up the chorus for the great choral portions of the oratorio.

Accompanists for the performance will be Lucille Thurmond and Lena Guilbert of San Jose. Singers from Ames participating in the concert are Richard Pea, of Wind Tunnel Instrument Research, and William T. Evans, of the 40- by 80-Foot Wind Tunnel.

### SPACE MEDICAL RESEARCH SCIENTIST NAMED

Dr. Clark T. Randt has been appointed Scientist for Space Medical Research in the Office of Research Grants and Contracts at NASA Headquarters, Washington, D. C. Previously, Dr. Randt was Associate Professor of Neurology in the Department of Medicine, Western Reserve University, and Director of the Division of Neurology, University Hospitals, Cleveland, Ohio.

Dr. Randt will plan a long-range basic research program in the life sciences which affect the national space program. It is expected that a large portion of this work will eventually be carried on by medical schools and other research organizations throughout the country under U. S. Government grants and contracts. In addition, Dr. Randt will assist the NASA in human factors studies related to manned space flight.

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Reporters: NASA Employees

### WANT ADS

Ride Wanted -- Vicinity of Park West Tract, Town & Country, Fairmede and Maywood in Santa Clara (off Stevens Creek Road). Call John Maher, ext. 363.

For Sale -- New Lodge or Champion Spark Plugs for any car, 70¢ each. Doug McDonald, ext. 226.

For Sale -- 13' Plywood Boat, Glassed, 18 hp Evinrude. Gear shift, boat trailer. Complete, \$300. Call Ernest Porter, Model Shop, ext. 234, or FR 8-4062.

For Sale -- 3-bedroom home in Palo Alto. Immaculate condition, newly painted inside and out. Close to schools and shopping. Includes W/W carpet and drapes. Insulated and weatherstripped. Lovely patio and lanai. Bearing fruit trees. FHA commitment available, or assume 4½% G. I. loan. \$17,500 - DA 5-2804.

## Astroventuring... ★ with walt krumm

### MARS

Of all the planets, Mars, fourth in order from the Sun (see table in Astrogram Vol. 1, No. 10) has held the greatest interest for us because of the question of the possibility or probability of its supporting some form of life. These subjects have been greatly emphasized in science-fiction.

From 1659, when the first known drawing of Mars was made by Huyghens, the observational history of Mars reads like a "Who's Who in Astronomy". Huyghens, Newton, Cassini, Halley, Herschel, Schiaparelli, Perrotin, Barnard, Antoniadi, Pickering and Lowell. The most complete study of Mars is probably that carried on at Lowell Observatory, Flagstaff, Arizona. This observatory was founded for the express purpose of studying the planets.

The keen interest in Mars is sharpened by the fact that the Martian atmosphere is transparent (as is ours), and one can watch the seasonal changes on the planet. When Mars is placed favorably for viewing (an apparition, it is called), one may see in a small telescope the over-all reddish-ochre surface and the brilliant pure white polar caps. Even a glimpse of the darker areas called "continents" may be seen, and as the size of the telescope is increased, these may be seen to turn a beautiful green. If you have a large telescope and sharp eyes, you might possibly see the famous and controversial "canals" of Mars though some of the greatest astronomers have never privileged this. And, too, other minute details appear to the skilled observer -- oases, double canals, fons, etc. There is nothing more gratifying in "amateur astronomy" than a night-to-night viewing of Mars until one's eyes become trained and these phenomena begin to appear to one's view.

If we allow Lowell's contentions that the "canals" so sharply defined and precisely geometrical virtually require artificial origin, the force of his arguments would be highly persuasive. Today's astronomer, knowing the physical conditions of Mars, precludes life on Mars as we know it, but there may be lower forms of life there (lichens, etc.). The only honest answer is, there is



## Ames Closeups



ROBERT T. JONES

The Vega Instrument Company, which manufactures such items as 12-inch reflecting telescopes, is owned and operated (with the help of one full-time employee) by Robert T. Jones of the Theoretical Aerodynamics Branch. Bob's hobby is optics, and he finds it relaxing after the theoretical work at Ames to go home and construct a telescope in his shop.

A member of the Ames staff since 1946, Bob started with NACA at Langley in 1934. Born in Macon, Missouri, in 1910, he attended the University of Missouri for one year, after which he took a position with a small airplane company in Marshall, Missouri. Bob had taken an early interest in problems of flight while still in high school and had read a number of NACA reports. His job with the airplane company became a casualty of the depression, and he went to Washington, D. C., in 1931. There he worked as an elevator operator in the House office building while pursuing his studies. During this period he took night courses under Max Munk and had the opportunity to consult informally with Dr. Albert F. Zahn on his studies.

His first job at Langley was as a Junior Scientific Aid. Shortly thereafter, he took the Assistant Engineer examination and began his engineering career with the NACA, being assigned to problems concerning the dynamic stability of airplanes.

Just before coming to Ames, Bob married Doris Cohen, who was also an Aeronautical Engineer at Langley. Doris continued her work here at Ames, resigning just last September. The Jones family includes four children—two boys and two girls.

## Visitors At Ames...

On April 9, fifty-eight senior electrical engineering students from the University of Utah were guests of Ames. They were conducted on a tour of our facilities by Merrill Nourse and Howard Frazee of the Electrical Branch, Bob Barnett of Dynamics Analysis, Bill Kerwin of WTIR, and John Leveen of Personnel.

A group of thirty-eight Los Gatos High School students were guests of Ames on April 15. Fred Demele of the 12-Foot conducted them on a tour.

Twenty-six members of the Anti-Missile Advisory Council, having recently attended a seminar at Stanford Research Institute, visited Ames on April 23.

Over thirty students from Oregon State College, Aeronautical Engineering majors, visited Ames on April 27. Roy Presley of the 6- by 6-, conducted the tour of our facilities. The students, en route to a student IAS meeting in Los Angeles, were also guests of the Ames Oregon State Alumni group at a barbecue Sunday night, April 26, at the home of Vic Stevens, HSR Division.

## STANFORD ANNOUNCES APPLIED MECHANICS CONFERENCE

Stanford University has announced the ASME-ASCE 1959 West Coast Conference of Applied Mechanics to be held at the University September 9, 10, 11, 1959.

The purpose of the conference is to promote presentation and discussion of information and original research in the field of applied mechanics, including the subjects of dynamics, vibrations, elasticity, plasticity, properties of materials, and nonlinear mechanics, and also to provide an opportunity for acquaintance among those interested in these fields.

Papers will be accepted for presentation at the Conference until the program is filled. Manuscripts which are not processed through the regular channels of ASME or ASCE, but which are submitted directly to the Conference should be sent to either of the following: Dr. Karl Klotter, Secretary, ASME West Coast Committee, or Dr. James M. Gere, Secretary, ASCE West Coast Committee, Stanford University, Stanford, California.

Manuscripts must be submitted by May 11, 1959, in order to be included in the published program.

## Recent Arrivals...



and resides in Palo Alto.

Bob, a member of the Peninsula Astronomical Society, will have one of his six-inch reflecting telescopes on display at the Ames May Day Soiree. Unfortunately, he will not be able to be here himself on that date since he will be attending a meeting of the American Physical Society in Washington, D. C. -- and maybe checking to see if everything is still running properly in the House office building!

Pictured above, left to right, are Angel Melendez, James Woodruff, and Eugene Bacans, who have joined the Ames staff during the period of April 9 to 23. Melendez is a draftsman for WTIR. He was formerly with Bethlehem Steel and lives in Palo Alto. Woodruff, a calibrator for WTIR, is also from Palo Alto, and was formerly employed by Sylvania Electronics. Bacans has been assigned as an engineering aid to the 1- by 3-. Formerly employed by the Frank Mayer Engineering Company of Sunnyvale, he is a



## ASTRONAUTS...

(Continued from Page 1)

training met the demanding requirements for the project. The seven ultimately selected were chosen as a result of physical, psychological, and stress tolerance abilities and because of the particular scientific specialty each represents.

Carpenter was born May 1, 1925, in Boulder, Colorado. He entered Colorado College in 1943 to participate in the Navy V-5 flight training program, and in 1949 he received his B. S. degree in Aeronautical Engineering from the University of Colorado.

Cooper was born March 6, 1927, in Shawnee, Oklahoma. After graduation from high school, he joined the Marine Corps and attended the Naval Academy Prep School at Bainbridge, Maryland. He attended the University of Hawaii for 3 years and received his B. S. degree in Aeronautical Engineering from the Air Force Institute of Technology at Wright-Patterson Air Force Base in 1956.

Glenn was born July 18, 1921, in Cambridge, Ohio. He attended high school and Muskingum College in New Concord, Ohio. He started his military career in 1942 as a Naval Aviation Cadet at the University of Iowa.

Grissom was born April 3, 1926, in Mitchell, Indiana. He received his B. S. degree in Mechanical Engineering from Purdue University in 1950. In 1955 he entered the Air Force Institute of Technology at Wright-Patterson to study Aeronautical Engineering.

Schirra was born March 12, 1923, in Hackensack, New Jersey. After a year at Newark College, he entered the U. S. Naval Academy and received his B. S. degree in 1945.

Shepard was born November 18, 1923, in East Derry, N. H. He graduated from Pinkerton Academy in Derry, N. H., and studied a year at the Admiral Farragut Academy at Toms River, N. J., preparatory to entering the U. S. Naval Academy. He received his B. S. degree in 1944.

Slayton was born March 1, 1924, and received his B. S. degree in Aeronautical Engineering from the University of Minnesota in 1949.

The selection process was completed at Langley, where final evaluation was undertaken by a group representing both medi-

## Save July 18 For Ames Barbecue!

The Ames Entertainment Committee has announced the scheduling of Saturday, July 18, for the Annual Ames Barbecue. This year the barbecue will again be held at beautiful "Blackberry Farm" at Sycamore Grove, Cupertino.

More details will be given at a later date, but the Committee just wanted to remind you to save that date!

## HANSEN AND JONES ATTEND WASHINGTON MEETING

Fred Hansen, of the 10- by 14-, and R. T. Jones, of Theoretical Aerodynamics, are attending an American Physical Society meeting scheduled for April 29 through May 3, in Washington, D. C.

A large portion of the program will be devoted to "space" and will include a symposium on the data gathered by the Vanguard and Explorer satellites as related to the upper atmosphere.

## GOING ON A VACATION?

If you need cash, why not borrow it from your Credit Union? Have a good time -- no money worries! Pay off your loan over an extended period, or pay it sooner and save interest. You pay interest only for the time you actually use the money.

Remember the added benefits of your Credit Union. First, you have life insurance equal to the amount of your unpaid loan. Second, any money on deposit to your credit carries an insurance benefit equal to the amount on deposit up to a maximum of \$2,000.

How can you lose when you do business with the people you know at your Credit Union! Office hours 11:45 a. m. to 12:30 noon, or 4:00 p. m. to 4:45 p. m., Building 62, Navy Side. Phone 309.

Robert R. Gilruth, director of the NASA Space Task Group, also is director of Project Mercury. Headquarters for the group, and the future home of the astronauts, is at Langley. Astronauts will train at a number of locations throughout the country, including the Wright Air Development Center; Naval Air Development Center, Johnsville, Pennsylvania; Atlantic Missile Range, Cape Canaveral, Florida; and at biomedical centers

## Stork Strikes Again

In a recent issue of the Astrogram we expressed the growing concern of the Personnel Office over losing two of its valuable employees at approximately the same time, namely, Lorraine Vernon and Mary Lou Flattley, who are anticipating the stork's arrival by early fall.

Another blow to the Personnel staff fell as that issue went to press by the announcement of Laura Pulvino, who has been head of the transactions section for approximately 13 years, that she, too, was joining the club. This was followed a few moments later by the same announcement from Laura Bienapfl, who types every word you read in the Astrogram.

This leaves only five women in Personnel, and, as Vince Pettine, Assistant Personnel Officer, points out, the pattern has been set -- it's only a matter of time.

## SAVINGS BOND CAMPAIGN PLANNED FOR MAY

The U. S. Treasury Department has planned an intensive campaign for new subscribers to be conducted during the month of May. As in previous years, their goal is 25% of personnel who are not currently members of the payroll savings plan.

In a letter from Dr. John F. Victory, Assistant to the Administrator, NASA, and Alternate Member of the Interdepartmental Savings Bond Committee, Dr. Victory congratulated the staff on its past record in the savings bond program. Ames completed the year 1958 with 47.3% participation. The goal for 1959 is to increase participation by at least 188 over those participating at the end of the year.

NASA's over-all participation for 1958 was 51.17%, slightly under the average for all government employees, which was 56%. The Treasury's goal of 25% of non-subscribers, if attained, would put us well over the national average and up among the leading agencies, Dr. Victory said. He added, "The payroll savings plan is the easiest way to save money that has ever been devised. Personnel who subscribe to payroll savings bonds subscribe to the stability of our government, and to their own financial future."

Bond authorization cards for use in joining the payroll savings plan or in increasing current allotments may be obtained from the Voucher Processing Section.



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

MAY 14, 1959

NUMBER 15

## NASA Space Center Named

Dr. T. Keith Glennan, NASA Administrator, has announced the Government's space projects center at Beltsville, Maryland, will be named the "Goddard Space Flight Center," in commemoration of Robert H. Goddard, American pioneer in rocket research.

The Goddard Space Flight Center, under the over-all guidance of the Director of Space Flight Development at NASA Headquarters, will perform basic space research and will be responsible for the development of satellites, space probes and vehicles, tracking, communications, and data reduction systems. In addition, the facility will eventually be a command control center for NASA space flight operations.

The organization of NASA's new Space Center includes a director, not yet appointed; three major research and development groups, each headed by an assistant director; and business administration and technical services departments.

John W. Townsend, Jr., formerly Chief of NASA's Space Sciences Division, has been appointed Assistant Director for Space Sciences and Satellite Applications.

John T. Mengel, former head of the Space Tracking Systems Branch in the Vanguard Division, has been named Assistant Director for Tracking and Data Systems.

Robert R. Gilruth is the Center's Assistant Director for Manned Satellites. He currently heads the Mercury manned space flight project.

Michael J. Vaccaro, formerly assistant head of the Administrative Management Office and Personnel Director at the Lewis Research Center, has been appointed Business Manager of the Space Center. The head of Tech-

nical Services has not been announced.

The Goddard Space Flight Center will be built on an approximately 550-acre tract acquired from the Government's Beltsville Agricultural Center, north of Washington, D. C. Located east of the Baltimore-Washington Parkway, the site is bounded on the south by Glendale Road.

The contract for the first two major buildings at the Center -- the Space Projects Building and the Research Projects Laboratory -- was let April 10, 1959, to Norair Engineering Corporation of Washington, D. C., at a total cost of \$2,882,577. These two-story buildings, scheduled for completion in mid-1960, will total about 100,000 square feet of laboratory and office floor space. They will house a staff of about 450. The remainder of the staff of the Goddard Space Flight Center will be housed at the U. S. Naval Research Laboratory in Washington, and at the Langley Research Center until the completion of the facility.

## Mercury Search & Recovery Plans

The NASA and the Department of Defense have set up a joint working group on search and recovery aspects of the Project Mercury manned orbital vehicle program. Co-chairmen of the group are Edmond C. Buckley, assistant NASA director for Space Flight Operations, and Rear Admiral J. W. Gannon, assistant Chief of Naval Operations (Fleet Operations).

The search and recovery phase of the Mercury project involves facilities of the Army, Navy and Air Force. Ships of Destroyer Flotilla Four have been conducting early experimentation in the Hampton Roads, Virginia, area with a full-scale

## Launching Postponed

Three space launchings planned by the NASA, which had been unofficially reported as being scheduled for April and June, have been postponed because of technical difficulties.

The first was to be a satellite launched into an elongated orbit extending some 30,000 miles into space. In addition to other experiments, this project was designed to test the operations of equipment to be carried in the two remaining payloads, the latter to obtain cosmic radiation and other data on journeys millions of miles into space, in the general direction of Venus. The three launchings will be delayed until the technical difficulties are surmounted.

Dr. Abe Silverstein, NASA Director of Space Flight Development, made the following comment: "As is widely known, the astronomical tables tell us that the energy and guidance requirements for a shot toward Venus will be at an 18-month minimum during the early part of June. A firing toward Venus was challenging. For this reason, when these experiments were undertaken in November 1958, we targeted the project toward an attempt to approach Venus in early June.

"Engineering difficulties developed in both the payload and the boost-vehicle system. Therefore, the firings have been postponed until a later time."

In this decision, Dr. Silverstein's staff is in complete agreement with the Air Force Ballistic Missile Division and the Space Technology Laboratories who are performing this work for NASA under a contract with the AFBMD.

research capsule model to determine methods of bringing the vehicle on board ship after it lands.

As presently planned, the Mercury vehicle will come down in the Atlantic following its orbital mission.



## Ames Closeups



LORRAINE VERNON

If you want to hear the tale of the "Ames Detachment" (those trying days in 1944 when the draft board was claiming all of our scientists and mechanics whom we would eventually get back in uniform), or if you want to be filled in on the details of the Navy V-12 program and the many young scientists who stayed on afterwards to become permanent staff members, or if you are interested in how our payroll procedure was established or who is filling what position in the next month, you can get all this information from one source. Not the oldest employee on the field, but one of the young (and very attractive) members of the staff can answer these and almost any other question you can ask her about Ames.

A native of Santa Clara, Lorraine Vernon came to Ames June 1, 1942, from the California Water Service Company where she worked for one year after graduating from Healds College, San Jose. Her first position here was as a clerk-steno in Ad. Services. After six months she was transferred to Personnel as Time, Leave and Payroll Supervisor. When that function was taken over by the fiscal office, Lorraine remained in Personnel. In her position as Payroll Supervisor, she went to NACA Headquarters in Washington, D. C., in 1945 for a three-month course in payroll procedures. On return to Ames, she set up the system we are currently using. Shortly thereafter she served as the assistant to the Personnel Officer and in 1948 took her present position as Placement Officer.

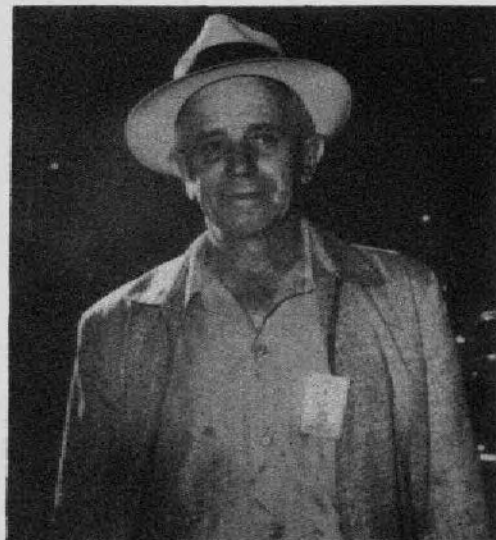
An Ames dance was responsible for Lorraine and Ed Vernon (ASM) meeting. They were married on Easter Sunday, 1946.

The Vernons enjoy pheasant hunting in the Willows and Gridley areas and trout fishing in the Sierra.

Less leisurely, but just as exciting, is the square dancing class of which they are members. They joined the Folk Dancing Class started by Ray Addison (MIB) in 1950. This class was discontinued shortly after the start of the Korean War. In 1956, the Vernons joined a Los Altos square dancing group and are still members. Lorraine enjoys cooking and frequently has large numbers of guests in for dinner before a square dance. At her home in Palo Alto, where they have lived since moving from Santa Clara in 1950, Lorraine occupies her spare time sewing, making most of her own clothes.

On leaving the water company after one year's association in 1942, Lorraine was said to have shed tears. After 17 years at Ames, a few man-sized handkerchiefs would be handy to have around when she leaves on June 26 this year.

## Retiring....



ATTILIO MONTERASTELLI, who came to Ames in 1944, has reached the mandatory retirement age and will retire from his position in the Machine Branch on May 29. A native of Fanano, Italy, Monterastelli was in the fruit packing business in Fresno after coming to California. Later he turned to farming in Sunnyvale and worked as a gardener in Los Altos before coming to Ames. A dinner honoring his retirement is being planned for the Old Plantation on May 23, sponsored by members of the Machine Branch, at which time he will receive farewell gifts from his fellow employees.

## Visitors At Ames...

Visiting Ames on Monday, May 4, 1959, were Ernest W. Brackett, Homer J. Stewart, Addison M. Rothrock, George H. Clement, Dr. Clark Randt, Boyd C. Myers, and George P. Bates, all from NASA Headquarters.

George Rhodes, of the San Francisco Call-Bulletin, visited Ames on Friday, May 1, to gather information for a newspaper article that appeared in the May 7th Call-Bulletin.

### AMES EXHIBITS

Ames will have an exhibit, including several planes at Navy Hangar 1 on Moffett Field May 16, in celebration of Armed Forces day. An exhibit is also planned for the Sunnyvale Panorama of Progress to be held at the Sunnyvale High School on May 22 and 23.

### PERSONNEL MANAGEMENT CONFERENCE HELD IN S. F.

The tenth annual Federal Personnel Management Conference was held in the Fairmont Hotel in San Francisco on May 7 and 8. Dr. Smith J. DeFrance, Director of Ames, was chairman of a panel on "Management of Missile Men". Other staff members of Ames attending the conference were M. Helen Davies, Personnel Officer; Vincent Pettine, Assistant Personnel Officer; Lester Briggs, Classification and Wage Administration Officer; and Cleve Foss, Assistant Classification Officer.

## Recent Arrivals...



Joining the Ames staff during the period of April 23 to May 7 were (top to bottom) Mary E. Arnold, formerly with Army Ordnance in Ordnance, Oregon, and now assigned to Fiscal; Elaine H. Scheide, formerly with Lewis Research Center, Cleveland, Ohio, and now assigned to Procurement; and Isabel "Bobbie" Franklin, formerly with the U. S. Naval Air Station in Kodiak, Alaska, and currently assigned to Dynamics Analysis.



## Astroventuring...

★ with walt krumm

Because the next planet, moving outward from the Sun from Mars, is missing and in its place are the asteroids, we will pass over these until later in this series and talk about Jupiter.

Jupiter is the fifth planet in order from the Sun (see table in Astrogram, Vol. 1, No. 10) and deserves its kingly name for, next to the Sun, it dominates the solar system. Jupiter is larger than all the other planets put together and 317 times as massive as the earth.

In appearance Jupiter is distinguished by its prominent belt markings parallel to its equator and its noticeably elongated oval shape. The belt markings are deep red or brown cloud-like bands against the creamy white background (also cloud). These belts rotate at different speeds at different latitudes and (imagine) necessitate a different clock and calendar for each latitude. Even the same latitude bands north and south are not the same but irregular. The planet appears flattened and oval because of its very rapid rotation of 9 hours, 50 minutes (average). Permanent markings allow us to measure these rotational rates, one of which is the famous "Great Red Spot".

Were we to visit Jupiter, and we are not sure it has a solid surface upon which to land, the ammonia-methane atmosphere would be most unpleasant, not to mention its  $-216^{\circ}\text{F}$ . temperature, for it receives only 1/20 as much sunlight as the earth.

Jupiter has 12 moons, 4 of which may be seen easily in a small telescope. Think what it would be like to have 2 or 3 more moons on a spring evening instead of just one. Along with the planetary detail these moons are most interesting to observe as they transit, eclipse and are occulted by the planet. One of the most fascinating experiences in amateur astronomy is to watch a Jovian moon disappear completely in space into the shadow of the planet while it is still quite distant from the planet, a "now you see it-now you don't" phenomenon.

The uniformly cold Jovian climate knows no seasons. The equator is inclined only  $3^{\circ}$ , and its orbital eccentricity of 0.0484 at Jupiter's distance is too small to create a seasonal change from

### HELEN TOMINAGA, WAYFULL JEW MARRIED

In a double ring ceremony performed by the Rev. Maynard Kennedy at the Grace Baptist Church in San Jose on Sunday, March 22, Helen Tominaga and Wayfull Jew were united in mar-



riage. Attending the happy couple were maid of honor Heidi Nakagawa; bridesmaids Vernie Ching and Mary Nanamura, sister of the bride; best man Willie Jew, brother of the groom; ushers Roy Frontani and Waychen Jew, also a brother of the groom; and the bride's parents and groom's mother.

Following the wedding, a reception was held in the social hall of the church. The bride (Low Density & Heat Transfer W. T. Branch) and groom (8-by-7-Foot Supersonic W. T. Branch) met while attending San Jose State College. The couple honeymooned in Southern California before returning to San Jose where they now reside.

### SPRING FLOWER SHOW

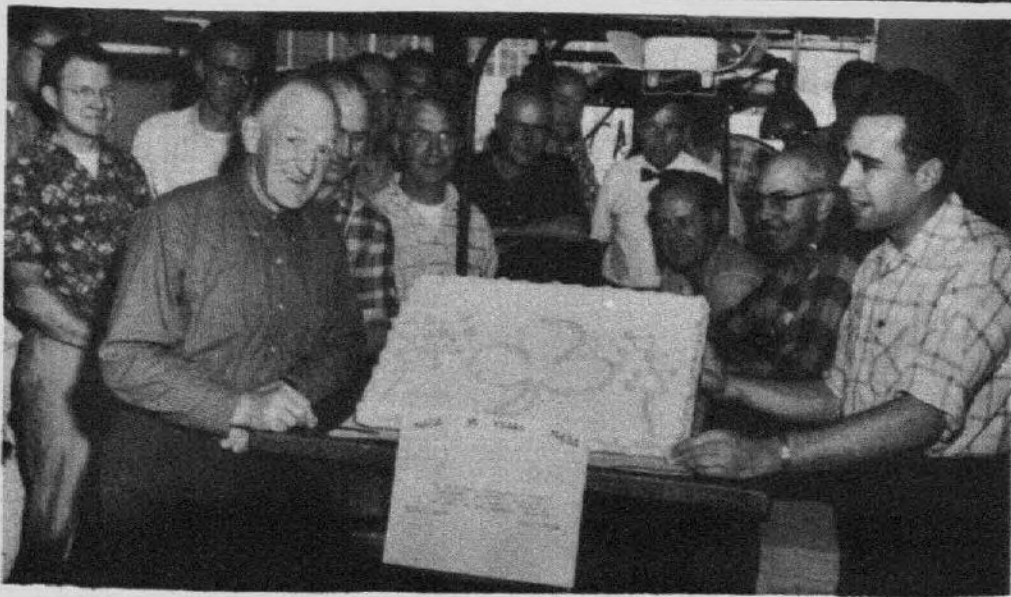
A spring flower show, "Symphony of Flowers", will be given by the Floraphiles Flower Arranging Club at the Crocker Anglo Bank, McKinley and Frances Streets, Sunnyvale, on Friday, May 15. The bank will be open from 10:00 a. m. to 6:00 p. m.

There will be accredited judges who will award ribbons, and a trophy will be donated by the Crocker Anglo Bank. Schedules are available at the bank. All flower lovers are cordially invited to attend the show.

### FILM CLASSICS CLUB SEEKS NEW COMMITTEE MEMBERS

The Film Classics Club has recently completed its second season at Ames. Due to diminishing attendance during the last season, several members of the committee expressed the opinion that the films be discontinued. However, the decision was made that before this step was taken, all employees should be given an opportunity to participate in planning the continuance of the bi-weekly feature.

In view of the diversified tastes in films expressed in the past, the present committee members agreed that a new committee should be formed to select the films for the next season starting about September 15. The new committee must be organized in the very near future. Anyone interested in joining the committee may contact Armando E. Lopez, ext. 288. Suggestions for improving the program will also be welcome.



JAMES V. KELLEY, left foreground above, Chief of Mechanical Instrument Branch, celebrated 35 years with the NACA-NASA with a cake and a party in the Branch shop on Friday, May 1. Kelley joined the NACA at Langley Field in 1924 and was part of the staff transferred to Ames when this Center began operations. He says he has been planning to retire every week since the days he was stationed at Langley, but just never got around to it. Kelley reaches the mandatory





ON THE FAIRWAY....

Sparkling golf at Riverside resulted in a tie between O. Meckler and A. Petretti after 22 holes of play. The tie continued for 18 more holes on the putting green before Meckler could claim his trophy in the first flight with an ace on the 41st hole! A new controlled swing enabled J. Nelan to breeze home as winner of the second flight, while J. Monfort was hard pressed to stay ahead in the third flight.

Besides the three trophies, golf balls were awarded to second, third, and fourth places.

## FIRST FLIGHT

	GROSS	NET
O. Meckler	76	68
A. Petretti	79	68
F. Lazzeroni	80	70
V. Fietzer	87	71
C. Fitzmaurice	82	72
R. Griffin	87	77
F. Pfyl	92	78
L. A. Clousing	96	80
B. Tinling	96	70
H. Clements	98	82

## SECOND FLIGHT

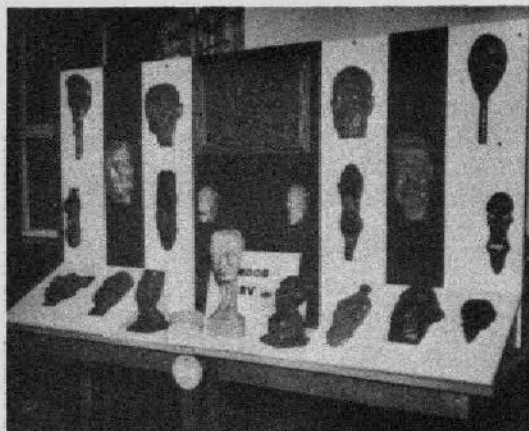
J. Nelan	84	67
L. Bright	87	71
F. Follette	95	75
C. White	93	76
B. Beam	93	77
T. Plum	97	77
B. Kelley	101	82
T. Smith	107	88

## THIRD FLIGHT

J. Monfort	94	74
J. Barrie	106	75
A. Lopez	98	75
J. Gonzales	106	75
J. Wyss	97	76
H. Stefani	101	80
L. M. Clousing	108	85
C. Tinling	118	87
B. Cunningham	122	87

The next tournament is scheduled at Hillview on May 16, 7:30 a.m. All Ames golfers are invited to play. Nominal initiation and yearly dues are used to defray prize expenses. To enter,

## OVER 600 ATTEND SOIREE



Shown here are some of the displays that made up the Ames Soiree on Friday night, May 1. Over 600 attended the show, which gave Ames employees the opportunity to become acquainted with their talented co-workers and witness the fascinating products of their various arts. Members of the Ames En-



tertainment Committee are already hard at work planning the next event for Ames staff, the Annual Barbecue, scheduled for July 18 at the Blackberry Farm.

## NEWBY NAMED NASA REPRESENTATIVE AT AOMC

David H. Newby, space and aeronautical scientist, has been appointed representative of the NASA at the Army Ordnance Missile Command, Huntsville, Alabama. He assumed his new duties May 4.

Newby's responsibilities include technical monitoring of NASA-funded projects at AOMC and maintaining liaison between NASA and the Army on programs of mutual interest. He will report to the Director of Space Flight Development at NASA Headquarters, Washington, D. C.

Formerly employed by the NACA at Langley Field, Newby has been with the U. S. Army Ordnance Corps at Redstone Arsenal in Huntsville since 1951, where he served one year as Deputy Chief of the Test and Evaluation Laboratory, engaged in rocket and missile testing. In 1952 he was named Chief of the Laboratory, a position he held until his appointment to the NASA staff.

Newby received a Bachelor of Science degree in Electrical Engineering from Georgia Institute of Technology in 1942. He is a member of the American Rocket Society and the American Ordnance Association.

just call Mitch Radovich, ext. 232.

The May 16 tournament will be organized and handled by F. Lazzeroni, F. Pfyl and G. White, all of the 6- by 6-Foot Wind Tunnel.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, --phone 385. Deadline: Thursday between publication dates. Editor: B. P. Wilson  
Reporters: NASA Employees

## WANT ADS

Ride Wanted--From 521 Virginia Campbell, or vicinity Winchester and Prospect, 7:30 to 4:00 shift. Call Ruby Schultz, Air Force Liaison Office, ext. 264.

For Rent--2 bedroom unfurnished front duplex. Tiled bathroom and kitchen. \$110 a month, includes water and garbage. No children. 527-A Toft Street, Mt. View. Call YO 7-3437.

For Rent--Cabin at Bijou, Lake Tahoe, 1 1/2 miles from State-line, beginning May 30. Contact Joe Quartuccio, ASB, ext. 291.

For Sale--1/8 ownership in the Ames Flying Club (Cessna 170). Membership \$245, monthly dues \$5, hourly flying rate \$3.60. Call or see Chris Taylor (10- by 14-), ext. 317, or Walt McNeill (Flight Res.) ext. 206.

For Sale--1956 Volkswagon, Sun Roof, black, W/W tires, red leather upholstery, radio. \$1220. Call WH 8-6495.



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

MAY 28, 1959

NUMBER 16

## Convair Named Vega Prime Contractor

In a \$33.5 million contract, NASA has named Convair (Astronautics) Division of General Dynamics Corp., prime contractor for Vega, a launching vehicle capable of putting a 5000-pound satellite in an Earth orbit. The contract calls for eight vehicles by the end of 1961.

Vega, which may be used as a two-stage as well as a three-stage vehicle, will be ready for test flights by late 1960. A two-stage version should be capable of lofting a two-ton space laboratory carrying several men in a 300-mile orbit for several weeks. A third stage would be added for moon and planetary probes.

The first of NASA's more advanced boosters, Vega will consist of a modified Atlas as a first stage, a second stage by Convair using a Vanguard booster engine, and a new third stage using storable fuel (nitrogen tetroxide and hydrazine) that can be carried on long missions without evaporating like other liquid fuels.

Fully loaded, Vega will weigh about 295,000 pounds and stand as high as a 10-story office building.

Vega guidance will be by autopilot in the second stage, and inertial in the third stage with a system of jets to correct its flight path in space.

The contract does not include the cost of the 365,000-pound thrust Atlas. Additional contracts for parts of Vega include: General Electric Co. -- \$4,120,000 for liquid-fueled second stage engines, and JPL -- \$6.4 million for third stage engine. JPL also has technical Vega project supervision as well as responsibility for planning planetary payloads.

## NASA COMMITTEE FORMED TO STUDY SOCIAL-POLITICAL ASPECTS OF SPACE ACTIVITY

T. Keith Glennan, Administrator of the National Aeronautics and Space Administration, announced recently the formation of the NASA Committee on Long-Range Studies.

The Committee's responsibilities center around that portion of the National Aeronautics and Space Act of 1958 (Sec. 102) which calls for "the establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes."

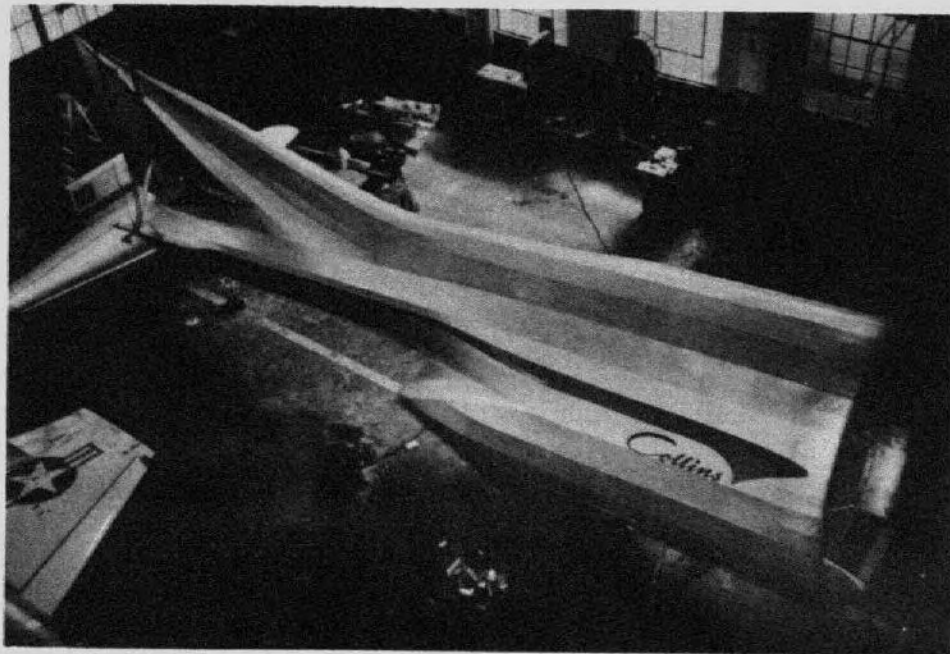
The Committee will deal with

such non-technical issues as the international, social, economic, and legal effects of space research and exploration.

Chairman of the Committee is John A. Johnson, NASA's General Counsel. Members, all of the NASA staff, are: Henry E. Billingsley, Director of International Programs; Homer J. Stewart, Director of Program Planning and Evaluation; and Wesley L. Hjornvik, Assistant to the Administrator.

Jack C. Oppenheimer, formerly Attorney Advisor in the Office of the Solicitor, Department of the Interior, has been appointed Executive Secretary of the Committee.

## Aerodyne Here for Testing



Recent arrival at Ames is the Collins Aerodyne, shown above. It was developed by Dr. A. M. Lippisch of the Collins Aeronautical Research Laboratory, a division of Collins Radio, and is being assembled here prior to tests in the 40- by 80-. Inside the large cylindrical fuselage two Lycoming L-435-17 engines are mounted one behind the other. Each engine drives a 7½ foot propeller, one a tractor type, the other a pusher. The air stream is deflected by fins through openings in the lower portion of the fuselage. The Aerodyne is designed to take off vertically, hover, or fly at high speed. The 40-foot model to be tested at Ames has no cockpit. A 1/10 scale model of the Aerodyne is now being tested in the 7- by 10-. Both the Army and Air Force are interested in the vehicle presently intended to carry one man and a light payload.



## SAVINGS BONDS PACKETS DISTRIBUTED

Packets containing full information on how you too can save under the payroll savings plan were distributed to Ames employees yesterday. In accord with the U. S. Treasury Depart-

ment's campaign for 25% of personnel not currently members of the plan, Ames needs to increase its subscribers by nearly 200.

Additional information on subscribing to the payroll savings plan may be obtained from the Voucher Processing Section, ext. 308.

# Personnel-ly Speaking

## LIFE INSURANCE CHANGES

Last January at the Board of Governors meeting, four changes were proposed for the NASA group life insurance program. The Home Life Insurance Company has recently approved these changes:

(1) Use of "Statement of Health" Form in Lieu of Medical Report - Until September 30, 1959, employees may apply for our group life insurance by simply completing a "Statement of Health" form G-423. These applications or forms will be reviewed by Home Life and will be accepted or rejected on the basis of each individual's health statement or medical history. Home Life's decision will be final. Employees whose applications are rejected will be permitted to provide evidence of insurability from a physician before they can enroll. The Board of Governors proposed this change to save employees classed as good health risks the cost of a medical examination. Application Form G-423 may be obtained by calling the Voucher Processing office, ext. 308.

(2) New Employee 90-Day Enrollment Period - Individuals employed on and after March 1, 1959, may now join the NASA group life insurance program without medical examination during their initial 90-day enrollment period. Their insurance will be effective on the first day of the calendar quarter following the date they return signed enrollment cards. However, they must have paid their quarterly premium and be actively at work on the effective date. This provision increases the enrollment eligibility period from 31 to 90 days.

(3) Educational LWOP Cases May Continue Insurance Four Years - Beginning April 1, 1959, employees granted official leaves of absence to attend educational institutions may continue their life insurance for a period up to four years. Such cases were formerly limited to one year.

(4) Optional Retention of Higher Insurance Amount When Salary is Decreased - After October 1, 1958, any employee who receives a decrease in his basic annual salary which places him in a lower insurance class may retain the higher amount of insurance coverage based on his previous salary.

## SCHEDULE OF INSURANCE

Description of Class (Employees Whose Basic Earnings are - )	Employees	
	Life Insurance Face Amount	Quarterly Payment
Class 1 Less than \$4000	\$2000	\$2.60
2 \$4000 but less than \$5000	\$4000	5.20
3 \$5000 but less than \$6000	\$6000	7.80
4 \$6000 but less than \$7000	\$7000	9.10
5 \$7000 but less than \$8000	\$8000	10.40
6 \$8,000 but less than \$10,000	\$10000	13.00
7 \$10,000 but less than \$12,000	\$12000	15.60
8 \$12,000 but less than \$14,000	\$14000	18.20
9 \$14,000 and over	\$15000	19.50

The above schedule became effective April 1, 1959, and enabled the great majority of our insured employees to increase their insurance coverage. The new certificates will be available shortly. The old certificates will be picked up by the Branch insurance representatives and returned to Fiscal.

## Astroventuring... ★ with walt krumm

### Saturn

The most beautiful of the planets, and sixth in order from the Sun, Saturn (see chart in Astrogram Vol. 1, No. 10) is the most distant the ancients knew and the last to be seen by unaided eye.

Saturn is thought to be more centrally condensed than Jupiter (a smaller central ball) with an atmosphere of ammonia and methane of much greater depth. It's low temperature of -243°F. is due, of course, to its great distance from the sun. Saturn is observed to rotate in 10 hours, 14 minutes, but a Saturnian year is 29-1/2 Earth years long. As Saturn is inclined 26° 45' to the sun, it too would have four seasons of 6300 Saturnian days each.

Saturn owes its beauty to the delicately banded globe poised within its shining ring. Galileo's telescope was not quite good enough for him to see this planetary spectacle, but a power of 25 or 30 will make Saturn and its rings look just like a jewel. The rings, 171,000 miles in diameter and 6,000 to 7,000 miles from the planet at their inner edge, are estimated to be about 10 miles thick and are the largest plane surfaces known.

Every 15 years Saturn's rings are seen on edge and appear as needles sticking out of the planet. In between times, one may view the rings, the planet, the shadow of the ring on the planet, and even a small amount of the shadow of the planet on the rings.

Rings, plural, and actually this is just what they are for the system is not solid but made up of small pieces (rocks) and divided into bands, follow Kepler's harmonic laws, the inner ring having a period of 5 hours and the outer a period of 14 hours, 27 minutes.

If one observes Saturn occulting a star of sufficient magnitude, it is most interesting to see the star disappear under the outer ring, appear with a flash between the outer and central ring, etc., appear between the rings and the planet, then disappear behind the planet only to repeat this again as it emerges on the other side.



## Ames Closeups



FRANK PFYL

After a tour of duty with the Armed Forces, many men become embittered at the prospect of being asked to volunteer for "extra-curricular" duties. But Frank Pfyl served in the Air Force for four years and still finds himself volunteering -- that is, he volunteered to take part in an "Ames Carnival" back about 1951, and ever since people have been drafting him into taking part at most Ames festivities. (If you were at the Ames Stampede last October, you will remember Frank as the hit of the evening with his pantomimic synchronization of "Tex Guinan".)

Born in Oakland, Frank was raised in Fresno and returned to the Bay Area about 1938. He attended Stanford, graduating with a B. A. in 1941. During his four years in the service he was assigned to the 7th Air Force in the western Pacific and returned to Stanford at the end of the war in order to obtain an M. S. in Aeronautical Engineering. During those summers following the war, Frank worked at Ames in the 1-by-3-. In 1949 he joined the staff as an Aeronautical Research Engineer in the 6-by-6-, where he is currently engaged when not volunteering for various other duties.

From 1947 through 1953, Frank was a member of the 20-30 Club, traveling over various parts of the western United States and Mexico in his duties as an officer in the organization. During this period he became interested in youth work. As a result, he joined a Palo Alto group in organizing a Little League, buying the property and building a field. Since then he has served as president of the organization, as a member of the Board of Directors, and as coach. In addition, Frank is a

member of the Board of Directors of the Palo Alto Babe Ruth League, a group which includes youngsters in the 13 to 15 year class. In the Little League (ages 9 to 12), Frank says they screen 300 to 500 boys a year to obtain their players.

When he's not involved in baseball (Frank played while at Stanford and was a semi-pro), he's winning Director's Cups in the Ames Golf Club tournaments. At least that was his accomplishment in 1958. Frank married during the war. He and his wife, Jane, and their boy and two girls live in Palo Alto.

Frank's future as an entertainer was guaranteed eight years ago when he walked out before the audience as "Flirty Girty" in the Ames Carnival. You will undoubtedly be seeing him again. If you do not recognize him by the picture at the top of the column, just ask the first person you meet wearing a

### STRAIN GAGE MAKER ANNOUNCEMENT OPEN

The Board of U. S. Civil Service Examiners at Ames announced the opening of Strain Gage Maker positions yesterday. The announcement will remain open until June 16, 1959. The positions are limited to women only and will be at the WB-2 level. For further information, check the announcement on your bulletin board.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, --phone 385. Deadline: Thursday between publication dates. Editor: B. P. Wilson  
Reporters: NASA Employees

blond wig. If a woman answers, you have the wrong man!

## Heading for Ames...



Ames Research Center will soon receive a Chance Vought F8U-3 for use as a research airplane. The U. S. Navy has announced that five of Vought's highly-automated, Mach-2-plus Navy fighters will be turned over to NASA for research related to passenger-carrying aircraft of tomorrow. NASA officials said the program will embrace studies on noise problems in supersonic aircraft, automatic pilot projects and high speed tracking by radar.

One of the most advanced fighter planes developed, this aircraft is capable of operating at space-edge altitudes above 95% of the Earth's atmosphere and of reaching speeds well above twice that of sound. Research performed by NASA as far back as 1953 is incorporated into the design of the F8U-3 and its predecessor, the F8U-1. At Ames, tests in the 6-by-6-Foot Supersonic Wind Tunnel and the Flight Research Branch contributed useful knowledge to the F8U-1 design. Fuselage pressure tests on the F8U-3 were made in the 9-by-7-Foot Supersonic Wind Tunnel and in the 14-Foot Transonic Wind Tunnel.

To be included in the tests on the F8U-3 on its arrival at Ames will be research work for both the Navy and the Air Force. Two of the fighters will go to Langley for similar research, and two will be held in reserve for spares.



# POINTS TO CONSIDER ABOUT YOUR CREDIT UNION

1. From its inception in April 1957 to the end of February 1958, your Credit Union made a total of 57 loans totaling approximately \$37,500 to its members. By the end of February 1959, your Credit Union had made 447 loans totaling \$185,700. The trust and acceptance of your Credit Union by your fellow employees is evidenced by this remarkable growth.

2. Your Credit Union is your personal organization. It offers more than the volume of dollar business indicates. Your savings plan and your loan is personalized to your individual need.

3. You run your own Credit Union. You yourself determine the rate of interest you will pay on loans and the dividends you will receive. What the figure will be next year depends on you. Join now!

Office hours: 11:45 a. m. to 12:30 noon and 4:00 p. m. to 4:45 p. m., Bldg. 62, Navy side. Phone ext. 309.

## VISITOR AT AMES....

Robert Clarke, French journalist from the Parisien Libere, visited Ames May 14 as a guest of Dan Wentz.

## RECENT ARRIVALS..



Joining the Ames Staff in the period of May 7 through 21 were the following (from top to bottom): Ruby L. Evans, a graduate of Texas Southern University, assigned to the Library as a library assistant, previously employed by the Smithsonian Institution, Washington, D. C.; Barbara Dorr, formerly with the U. S. Air Force at Hamilton Air Force Base, assigned to the Photographic Branch as a photo lab technician; and Mary Allen, formerly with the U. S. Army Engineers in Anchorage, Alaska, assigned as a clerk-typist to the Hypervelocity Ballistic Range Branch.



Through the green.... Cleo Wagoner and Harvard Lomax demonstrated golfing "par excellence" by adding 3 birdies to 22 par holes to win the first flight at Hillview. V. Fietzer and M. Radovich had to produce their best scores to stay in contention. Frank Follette and Armando Lopez successfully played to their handicaps to win the second flight with a team net par score.

### FIRST FLIGHT

	Gross	Hdcp	Net
C. Wagoner	74	8	133
H. Lomax	77	10	
V. Fietzer	82	14	136
M. Radovich	83	15	
E. Musselman	84	14	144
F. Pfyl	88	14	

A. Petretti	82	11	152
J. Nelan	97	16	
H. Mathews	88	16	153
P. Barisich	94	13	

### SECOND FLIGHT

F. Follette	90	20	142
A. Lopez	95	23	
J. Wyss	89	21	145
J. Monfort	96	19	
H. Clements	94	18	150
T. Canning	99	25	
G. White	93	18	152
B. Tinling	93	16	
B. Kelley	92	19	153
C. McFadden	108	28	
B. Cunningham	104	35	153
R. Sammonds	110	26	

L. Smith	101	23	154
C. Jones	108	32	

An individual point-par tournament with handicap is scheduled for Spring Valley on June 20, 10:00 a. m. Three flights and unique prizes will be featured. For details, call J. Monfort, ext. 334, or M. Radovich, ext. 333.

## SOCIAL CLUB FORMED -- JOIN THE FUN!

Sun, swimming, and barbecued hot dogs were enjoyed recently by members of the now-forming Ames Social Club. The setting for the party was the Foothills Club on Homestead Road.

The group is planning a dance scheduled for mid-June; everyone is invited so keep this time in mind and watch your bulletin board for further information.

The swim party was such fun that another is set for Wednesday, June 3, also to be held at the Foothills Club. Come and join the fun! Swimming 50¢, and the barbecue only 70¢. Please bring your own eating utensils, bathing suit and towel. For more details call Ruth Rider at ext. 247, Grace Carpenter at ext. 206, Dee Armstrong, ext. 308, or Pearl Pappas at ext. 216. See you there!

## WENTZ SPEAKS

Dan Wentz, Ames Information Officer, addressed the Federal Government Accountants Association Thursday evening, May 21. He also made recent addresses to the Los Gatos Kiwanis and the Redwood City Rotary Clubs.

## WANT ADS

For Sale--1954 17' x 7' Budget Travel Trailer, \$800. Excellent condition. Electric brakes, new tires, large 4-burner stove with oven and broiler, electric refrigerator, two wardrobe closets and plenty of storage area. Also new Butane light. See Art Melliar, photo lab, ext. 218.

Wanted--To join or form ride group. Vicinity of Cox Ave. & Highway 9, Saratoga. Call Lee Jorgensen, ext. 202.

For Rent--Nearly new unfurn. 2-bedroom duplex. Stove and refrigerator provided. Water & garbage paid. No dogs, please. \$105 per month. Just 5 minutes to Moffett. See at 365 Walker Drive, M. V., or call Lyle Wiggins, ext. 202, or YO 7-7961.

For Sale--1956 Chevrolet Convertible. Thrifty 6-cylinder, standard shift, radio, heater, WW tires, spotlight, excellent condition. Call Dee Tolliday, ext. 336, or DA 2-1484 after 5:30.



The

# Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

JUNE 11, 1959

NUMBER 17

## New Type Clock To Test Einstein Theory of Relativity

NASA has awarded a contract in the amount of \$50,000 to the Massachusetts Institute of Technology to develop an atomic space clock operating with cesium vapor. The clock is one of three types of clocks NASA is investigating for possible use in satellite tests of Einstein's theory of relativity.

Einstein's theory holds that time moves more slowly in space because of a gravity factor. The theory will be tested by taking simultaneous ground and space readings from extremely precise clocks.

This contract was one of a number awarded in April, the largest being \$24 million to Douglas Aircraft Corporation for Delta, a three-stage launching vehicle announced by NASA in April.

## GOETT & EGGERS ON SPACE COMMITTEE

Announced recently was the appointment of Harry J. Goett, Chief of the Full Scale and Flight Research Division, and Dr. Alfred Eggers, Chief of the 10- by 14-Inch Supersonic Wind Tunnel Branch, to the NASA Research Steering Committee on Manned Space Flight.

The committee has been established to guide the NASA research program on problems of manned space flight and to insure the existence of an adequate foundation of basic research applicable to these problems.

The committee, which reports to the Director of Aeronautical and Space Research, is headed by Goett. Other members include Milton B. Ames, Jr., Aeronautical and Space Research, NASA Headquarters; De Elroy Beeler, Chief of Research, High Speed Flight Station; M. A. Faget, Langley Space Task Group; Laurence K. Loftin, Jr., Langley; George

(Continued on Page 4)

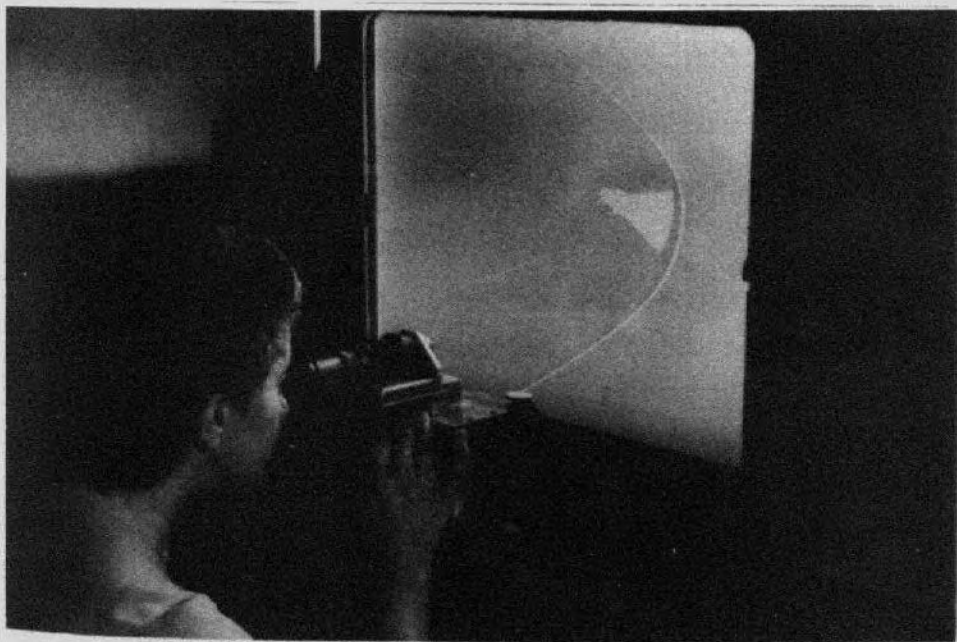
## F-104-B to be Used for Zero G Experiments

A modified F-104-B is currently making exploratory flights at Ames in zero-G experiments. The two-place aircraft carries the pilot in front, a pilot-observer in back, and will be able to maintain a state of zero gravity for periods up to 1½ minutes. Previous zero-G flights in other aircraft have been limited to periods of 15 to 20 seconds each.

The observer will be required to do tracking proficiency tasks during the zero-G periods. Aeromedical measurements will be taken to determine the effects on the human body.

Modifications to the plane included changes in the oil and lubrication system and in the oxygen system to prepare it for prolonged zero-G flights. Current flights are for short periods at zero-G for purposes of solving instrumentation problems.

## Mercury Capsule In Flight



Using an optical comparator, Evelyn Ercolini, of the Supersonic Free Flight Branch, measures the angle of flight of a Project Mercury capsule model as seen by the shadowgraph method. She is working with the original full-sized negative of one of many data pictures made during each test of a Mercury capsule model launched by a high-speed gun through an instrumented range. Such measurements contribute to the detailed analysis of the Mercury capsule's behavior in flight, a part of Ames contribution to the Man-in-Space Program.

**Remember... Save July 18 For Ames Barbecue!**



## Astronaut Program Outlined

A program of training, indoctrination and education has been drawn up for the seven Project Mercury astronauts to equip them with a wide range of technical knowledge and skills required to pilot the nation's manned orbital capsule.

The initial phase of the astronaut program is broken down into six areas of activity:

1. Education in the basic sciences - This area will include instruction in astronautics, particularly ballistics, trajectories, fuels, guidance, biology, space environment, astronomy, meteorology, astro-physics, and geography.
2. Familiarization with the conditions of space flight - This phase is designed to familiarize the astronauts with heat, pressure, "G" force levels and other special conditions of space flight. It will include periodic simulated flights in centrifuges and pressure chambers, weightless flying, disorientation devices, minimizing the effects of vertigo, and experiments with high heat environments.
3. Training in the operation of the Mercury space vehicle - The objective of this segment of the program is to provide a thorough knowledge of the Mercury vehicle and its functions. During this period the astronauts will study the onboard capsule equipment and its proper function.
4. Participation in the vehicle development program - Each of the astronauts will be assigned to a system or sub-system of the Mercury vehicle. In this work, he will acquire specialized knowledge of value to the entire group. This material will be exchanged in a series of informal seminars.
5. Aviation flight training - The Mercury astronauts will continue to maintain their proficiency in high performance aircraft in an aviation flight training program. Continued operation of high performance aircraft will give them additional altitude acclimatization, instrument flight training and the physiology of high altitude, high speed flight.
6. Integration of astronaut and ground support and launch crew operation - Familiarization with the operation of ground support equipment and launch crew operations will be accomplished in coordination with the agencies

providing boosters and launch facilities. Training in the operation and use of ground support equipment and observation of launch operations will provide the astronauts with complete knowledge of the launch phase of Mercury flights.

Experts in many of the scientific and technical subject areas

will give lectures to the astronauts during their educational program.

Each of the Mercury astronauts has been detailed to the NASA by his respective military service. They are still on active duty and receiving military service pay; the astronauts will remain on duty with NASA on a full time basis.

## Personnel-ly Speaking

### TYPES OF APPOINTMENT AND STATUS

From time to time questions arise as to the meaning of different types of appointment, tenure or status. This brief simplified explanation may be helpful.

Career and Career-Conditional Appointments. These are the normal permanent-type appointments employees receive when they are selected from civil service registers. Usually a new employee is appointed as Career-Conditional. He is converted to Career after 3 years of "substantially continuous service". If he had finished the required 3-year period during some previous government service, and the service is of the type that is "creditable", he would be appointed directly into the Career category. If a former government employee with competitive "permanent" status is reinstated, his reinstatement is to either Career or Career-Conditional tenure, depending on whether or not he had finished the necessary 3-year block of creditable service. Long-time government employees who were serving at the time these types of appointment were inaugurated several years ago, were converted to Career or Career-Conditional status based on the same criteria.

The 3-year conditional time is not a trial or probationary period. (The one-year probational period was discussed in this publication previously.) It is a period of service required to qualify for a higher tenure or retention standing, for reduction in force purposes. When an employee moves into the Career category, he has retention preference in a layoff over all other employees with whom he may be in competition who do not have Career tenure -- regardless of their length of service or veteran preference. For a non-veteran employee, conversion to Career status also marks the acquisition of reinstatement eligibility without time limit. That is, if he separates from the service he will be reinstatable. Separated non-veteran Career-Conditional employees have reinstatement eligibility for 3 years only. (Veteran preference employees have indefinite reinstatement eligibility, regardless of whether they are Career-Conditional or Career.)

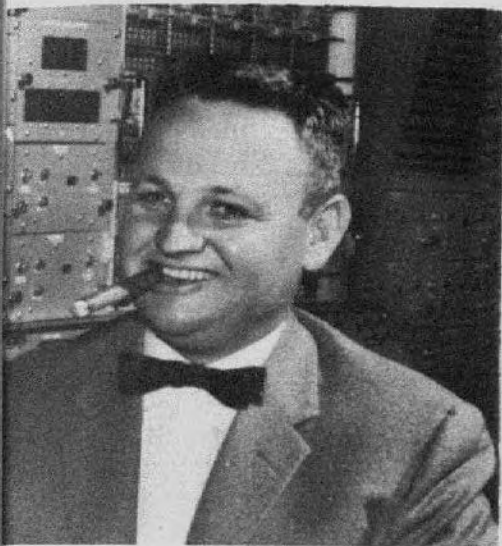
A Temporary Appointment Pending the Establishment of a Register (called "TAPER") is made when there are no eligibles on a regular civil service register for the position. This doesn't give the employee any kind of status, and it should normally be expected that the person would file in the appropriate examination at the earliest opportunity to get such status. There is no specified expiration date on this kind of appointment.

A Temporary Appointment not to exceed a given date -- expressed as NTE December 1, 1959, for instance -- is sometimes made to cover a job of temporary duration. The employee acquires no status. There is no formality to terminating the employee when his services are no longer needed.

There are a few employees with Indefinite appointments at Ames. However, there will be no more of this type in the future, and the incumbents already understand their status. Therefore, no explanation will be given here.



## Ames Closeups



STAN SCHMIDT

The month of July, 1946, was a big month for Stan Schmidt. He received his degree from Marquette University, his release from active duty, his commission as an officer in the U. S. Naval Reserve, and was appointed to a position at Ames Aeronautical Laboratory. Having attended Marquette under the Navy V-12 program, there have been only two weeks since February 1944 that Stan has not been in the Federal service, which, he says, makes him eligible for retirement (after 30 years service) when he is only 48! This is ridiculous, Stan says. No one retires at 48! (This is true. Minimum retirement age with 30 years service is 55.)

One of Ames' well-known personalities, Stan beats out jazz on a piano on the slightest provocation, as those who attend Ames Entertainment Committee functions are already aware. "I can't very well say no," Stan says, "Hy Zimmer, chairman of the committee, is in my branch!" Stan started at Ames in the Electrical Branch. After about 5 years he transferred to the Instrument Development Branch, two years later to EMC, and after two years more to his current position as Chief of Dynamics Analysis Branch.

A native of Hollister, California, Stan has spent most of his life in this state. His favorite pastime away from the piano is pursuing deer. He and his wife, Meredith, enjoy hunting on their 2200 acre ranch they have purchased near Hollister. He estimates he has bagged 25 deer in his hunting career, not counting those brought down by his wife. Meredith, currently

## Astroventuring...

★ with walt krumm

### Uranus

The seventh planet in order from the sun, Uranus (see chart in Astrogram Vol. 1, No. 10) was discovered by accident. Easily seen in a small telescope (though some people claim to see it by eye - about 6th magnitude), Herschel found it when sweeping the sky and called it a comet. Lexell, in Russia, computed its orbit and found it too circular for a comet and to be more distant than Saturn, a new planet.

With a day of 10-2/3 hours, a "year" of 84.02 years, a bitter temperature of -300°F., and an atmosphere of methane and a trace of ammonia, Uranus would be even more unpleasant to visit than Saturn or Jupiter.

If you wish to look for Uranus, it is now about 1/3 the way along the ecliptic between the Beehive in Cancer and Regulus in Leo. It will appear as a small greenish disc in field glasses or larger in a small telescope. Ask your tel-

employed in the 40- by 80-, was working in the Electrical Branch when they first met. Married in 1949, they are presently expecting their first child in August.

Stan received his Master's Degree from Stanford University in 1952. He has been working towards his PhD and will receive this degree this Sunday, June 14. For four quarters, Stan attended Stanford full time while working at Ames more than half time. This schedule, he says, is not recommended!

When not engaged in the pursuits mentioned previously, Stan turns to his electronic equipment as a hobby. Recently, he has also joined the Ames summer bowling league. To fill in his spare moments back in 1946, Stan organized a dance band and played for dances in Hollister and Salinas. However, he gave this up for occasional "solo" performances at Ames functions in recent years.

Over all, he still enjoys his week-end ranch life the most--as long as he doesn't get involved in working the ranch. "And, of course, to round out my day," Stan says, "there's nothing like sitting beside my neighbor's pool with a cigar and a tall, cool glass, doing nothing."

lescope neighbor to show you this.

Uranus is unique in that it rotates from east to west whereas the other planets rotate from west to east. It is tipped 82° to its orbit also (nearly a right angle). If we try to picture this, it would be as if the north pole were directed below the ecliptic: We would find the United States in the Southern Hemisphere, California in the east -- everything reversed. In winter the sun would make an 8° circle above the south pole, and in summer the land of the midnight sun would extend from Panama to Central Africa. Take a ball, put a wire through it, and try this sometime. This is as it would appear on Uranus.

## Recent Arrivals...



New employees reporting to Ames between May 21 and June 4 included (top to bottom) Herbert H. Chin, a resident of Oakland and former student of the University of California, assigned as a math aid to the 1- by 3-; Marjorie Ann Russell, formerly a school teacher in Columbus, Georgia, also a math aid, assigned to the Low Density and Heat Transfer Branch; Charles P. Longley, returning to Ames after more than two years in Hawaii with the U. S. Navy, and being assigned as an engineering draftsman in Mechanical Engineering; and Robert Wood, previously with Ford Motor Company in Milpitas, assigned as a stores attendant in Supply.



(Continued from Page 1)  
M. Low, Space Flight Development, Headquarters; Bruce T. Lundin, Lewis; Harris M. Schurmeier, Jet Propulsion Laboratory; and Ralph W. May, Jr., secretary, Aeronautical and Space Research, Headquarters.

#### JUNE IS BUSTING OUT ALL OVER

The following note appeared in the Lewis paper "Orbit" in a recent issue:

"... The June picnic will be held on Sunday, July 26, so adjust your schedule now..."

#### WANT ADS

Wanted--Cashier, Ames Cafeteria. Call Mr. Loucks, ext. 249.

All persons interested in the formation of a rifle and pistol club here at Ames, please contact Sid Copeland, Machine Shop, by mail, stating interest and Ames address. Do not telephone.

For Rent--2-bedroom apt., W/W carpets, drapes, built in electric stove and oven, refrigerator. Children OK. Willow Glen area. \$105 per month. Call Nancy Davis, ext. 275, or AL 2-8970.

For Sale--1958 MGA Roadster. Radio and heater. \$2100. Call Amherst 2-1944.

For Sale--1956 Chevrolet Convertible. 6-cyl., standard shift, radio, heater, spotlight, excellent condition. Call Dee Tolliday, ext. 336, or DA 2-1484 after 5:30.

For Sale--G. E. Air Conditioner, 1-ton unit, 220 volt, thermostat, dehumidifier, \$75. Call June Freiburger, ext. 337, or CH 8-6880 after 5:30.

For Sale--1948 Dodge 4-door. Good transportation, dependable; new battery, carburetor and pump. \$110. Call William Jibby, ext. 226.

For Rent--3-bedroom beach house. Furnished, ocean view, half block from Rio Del Mar Beach, Aptos. \$75/week. Call George Cooper, ext. 210, or UNION 7-3335.

For Rent--Cottage at South Shore, Lake Tahoe. One block from lake, one mile from Stateline. Reasonable weekly rates. Call Frank Prior, ext. 226, or FRANKLIN 8-3866.

## MILTON AMES NOW ASSISTANT NASA DIRECTOR

Milton B. Ames, Jr. has been appointed Assistant Director of Aeronautical and Space Research (aeronautics and flight mechanics) for the NASA, Dr. T. Keith Glennan, NASA Administrator, announced today.

Ames succeeds Ira H. Abbott, who recently was named Deputy Director of Aeronautical and Space Research. In his new post, Ames is responsible for organizing and coordinating NASA research programs in the aeronautics and mechanics of flight vehicles.

A native of Norfolk, Virginia, Ames was graduated from Georgia Institute of Technology in 1936 with a bachelor of science degree in Aeronautical Engineering. He joined the staff of the Langley Laboratory the same year. Serving there five years, he came to NACA Headquarters in Washington as engineering assistant to the director in 1941. After two years, he became assistant chief of military research, and in 1946 he was appointed chief of the Aerodynamics division. At the time NASA was established in October 1958, Ames was made chief of the Aerodynamics and Flight Mechanics Division.

The new assistant director is a Fellow of the Institute of the Aeronautical Sciences and is author of a number of technical publications.

#### VAN DYKE APPOINTED TO STANFORD FACULTY

Wallace Sterling, president of Stanford University, has announced the appointment of Milton D. Van Dyke as a professor of aeronautical engineering beginning September 1, 1959. Van Dyke, formerly with the Theoretical Aerodynamics Branch at Ames, is currently a visiting professor at the Sorbonne in Paris.

The ASTROGRAM, an official publication of the Ames Research Center, NASA, Moffett Field, Calif., is published bi-weekly in the interest of Ames employees. Send contributions to the editor, Personnel Branch, --phone 385. Deadline: Thursday between publication dates. Editor: B. P. Wilson  
Reporters: NASA Employees

#### ED PERKINS APPOINTED 9- by 7- BRANCH CHIEF



Edward W. Perkins, Assistant Branch Chief of the 9- by 7- since the tunnel's staff was organized, became Chief of the branch last week. Coming to Ames in 1941, Perkins went into the Navy in 1942, and returned to Ames in March 1946. He served in the 1- by 3- and with the Unitary staff until assigned to the 9- by 7-.

Perkins is a graduate of the University of California where he received his Bachelor's Degree in Mechanical Engineering.

Perkins' selection was the first to be processed under the Ames Merit Promotion Program.

#### HOW IS IT DONE?

"I'm travelling officially for the government for the first time. How do I make travel arrangements?"

"Whose signature do I prepare this letter for...."

"What procedure do I use in transferring from one branch to another?"

"I'd like some information on retirement...."

You'll find the answer to almost every question concerning Ames and your job by consulting



the Ames Procedure Manual. A copy of this book is available for reference or may be checked out over night at each branch office or from Administrative Services, Room 105, Administration Building.

This book is designed to help you. Please feel free to use it whenever the need arises.



# The Astrogram

AMES RESEARCH CENTER, MOFFETT FIELD, CALIFORNIA

VOL. I

JUNE 25, 1959

NUMBER 18

## ABBOTT SPEAKS ON "OLD FASHIONED ATMOSPHERE"

Ira H. Abbott, Deputy Director, Office of Aeronautical and Space Research, NASA, spoke at the recent 21st Annual Meeting and News Conference of the Aviation Writers Association held in Washington, D. C. The following is an excerpt of his remarks about aircraft of today and tomorrow:

".....I would like to blue-sky a bit, not about space vehicles but about aircraft. Some rather amazing things are still going on within, and just beyond, our old-fashioned atmosphere. These developments have tended to be overshadowed in the press by the fast-breaking developments in space.

"I would like to review the entire range of aircraft, from the 'ground-effect' system or air-borne land vehicle that coasts on an air cushion just above the ground, to the rocket-boosted Dyna-Soar glider with which we hope to explore the range between about 4,000 mph and satellite speeds of about 18,000 mph.

"In my opinion, VTOL (Vertical Takeoff and Landing) and STOL (Short Takeoff and Landing) aircraft have a bright future because both have useful military and commercial applications.

"Next we come to the hypersonic, rocket boosted Dyna-Soar. The immediate purpose of this manned vehicle is to provide research information more advanced than that obtainable from the X-15 and to indicate whether such a concept has military possibilities. The long-range purpose of this joint Air Force-NASA project is, as I have said, to probe the range between 4,000 mph and satellite speeds.

"I will not try to predict the speed limit for the efficient transportation of passengers or troops by air, but it appears to

(Continued on Page 2)

## Wind Tunnel Tests On Project Mercury Near Completion

Wind tunnel tests on Project Mercury space capsules currently being conducted at Ames, Langley and Tullahoma should be completed within approximately the next two months, according to Alan Kehlet of the Space Task Group who visited Ames on June 15 and 16.

Kehlet, who is coordinating all ground test programs in support of Mercury, was at Ames to discuss capsule stability problems and the results of stability tests recently conducted in the Ames Supersonic Free-Flight tunnel.

Although laboratory tests are near completion, Kehlet said that flight tests of both model and full-scale capsules will continue throughout the next two years, with the first manned orbital flights expected some time in 1961.

The full-scale flight test program is to be conducted in four phases designated by the booster vehicles to be used. The "Little Joe" series will use a booster, to be constructed by North American Aviation, consisting of clusters of Sergeant and Recruit solid-propellant rocket engines in various combinations. The capsules in this series, all unmanned, will reach a maximum Mach number of about 6 on a ballistic trajectory designed to demonstrate the dynamic behavior of the satellite during the latter portion of its re-entry and to evaluate its automatic control system. The capsules for the Little Joe tests will be built by the Langley Research Center. Lewis Research Center is responsible for developing and installing the automatic stabilization and control system. Launchings will be made from Wallops Island and are expected to begin in late July or early August of this year.

The "Big Joe" series will use Atlas D boosters, as will the manned orbital flights later. For

Big Joe the capsules will be unmanned, however, and will not be put into orbit but will be programmed on a ballistic trajectory to duplicate the Mercury re-entry from orbit, beginning at an altitude of about 85 miles. The primary objectives of this series include proof testing of the ablating heat shield under true entry conditions, verification of full-scale entry dynamics, and qualification of complete stabilization and recovery systems. The Big Joe capsules will be built at Lewis and launched from Cape Canaveral. First launching is scheduled for this summer.

The first manned flights in the Mercury development program will be made with the "Redstone" test vehicles. These will be short ballistic flights in complete Mercury capsules, built by McDonnell Aircraft Company, and will use the Army Redstone rocket for a booster. Initial unmanned tests in this series will qualify the contractor's capsule and the booster system for the manned flights to follow. These, in turn, will be used to train and qualify the Mercury astronauts for future orbital flights.

The final series in the flight test program is to use the Army Jupiter rocket to boost the McDonnell capsule, unmanned, to a Mach number of about 16 on a trajectory which will simulate the most severe decelerations and heating anticipated under the worst conditions the Mercury capsule could encounter: an aborted launch just prior to reaching orbital speed and altitude. The tests will be conducted from Cape Canaveral and are expected to begin early next year.

Following successful completion of these four series of flight tests, Project Mercury will enter into its final stages with orbital flights, carrying first animals and finally the Mercury astronauts.



## Astroventuring...

★ with walt krumm

### Neptune

Neptune, the eighth planet in order from the sun (see Astro-gram Vol. 10, No. 1), would have to be five times brighter than it is to be just barely seen.

Neptune was discovered on paper, not just once but twice, and then confirmed by telescope. Because Uranus, our newly-found planet of last week's column, did not behave as predicted and its perturbations indicated a more distant object, Leverrier and Adams independently calculated a position for this object. Leverrier's astronomer friend, Galle, found the new planet, Neptune, within a half hour's search and within 52 minutes of its predicted position. This fact is a proof of exact scientific method and mathematical astronomy.

Neptune, often called "Uranus twin", is also light green because of its methane atmosphere and may be seen in a small telescope.

Too cold for human existence, Neptune can hold little interest for the space traveler from its place as a planet. We do not know if it has a solid core to land on for a space traveler properly equipped for temperature and atmosphere.

From Neptune, the sun would appear too small to be seen as a disc but still 700 times as bright as our moon appears to us. If you divide its 164-year trip around the sun by 4, we should get a "summer" of 41 years, etc.; but Neptune's orbit is too nearly a circle, and it does not deviate sufficiently from the ecliptic to let a Neptunian tell the difference between summer, winter, etc.

\*\*\*\*\*

For those who wish to Astroventure ---- Peninsula Astronomical Society meets the first Friday of each month at the Junior Museum of the Community Center group, Palo Alto, at 8 p.m.

The San Jose Amateur Astronomers meet the first Monday of each month at San Jose State College (room S-131 of the new science building) at 8 p.m.

The Amateur Astronomy adult education class of Fremont High School meets at 10628 Larry Way, Cupertino, every Tuesday during the summer at 8:30 p.m. Phone ALpine 2-4178 for information.

## Ames Closeups



CARLTON BIOLETTI

Travelling around the world as a Merchant Marine Cadet with the Dollar Steamship Lines, following graduation from high school, made a lasting impression on Carlton Bioletti. Returning to California after this trip, he attended the University of California at Berkeley, graduating in engineering, and took a position with the NACA at Langley Field. To get back to Virginia, he naturally chose the most enjoyable mode of travel -- he worked as a seaman on a freighter sailing through the canal to the east coast!

Mr. Bioletti joined NACA in 1930 as a Junior Aeronautical Engineer. In March 1940, he was assigned to the new Ames laboratory, working with contractors on what was then the 16-Foot Wind Tunnel (now the 14-Foot). In the years that followed, he became an Assistant Director at Ames. By 1952, the urge to travel resulted in a 3-month vacation during which Mr. and Mrs. Bioletti travelled from San Francisco to Hawaii, then to Alaska, and down the inland waterway to Vancouver, Victoria and Seattle. This merely served to whet their appetites for more extensive travel.

By 1954 the Biolettis were ready to go again. This time he took a year's leave of absence and they travelled to Europe, North Africa and around the world, starting from San Francisco on a French Line freighter and continuing to make most of the journey by steamship. In the Mediterranean they joined friends and sailed on a 48-foot ketch, spending considerable time in the Balearic Islands located just south of France and east of Spain.

Returning to Ames, Mr. Bioletti settled down to work for three months when an opportunity presented itself that was irre-

### AMES SOCIAL CLUB PLANS PARTIES

On July 1, July 15, and every other Wednesday throughout the summer, there will be an Ames Social Club swim and barbecue party. Everyone is invited so bring yourself, your friends, a towel and eating utensils, and meet us at the Foothills Club on Homestead Road next Wednesday after work!

There's a dinner-dance coming up too, which will be held at the Sunnyview Family Club on 266 Escuela, Mountain View, on Saturday evening, July 11. A delicious Italian dinner, a bottle of wine, and dancing all evening to an orchestra, all for \$2.75, so how can you miss? Come alone, in couples, or in a group!

Reservations can be made through Don Humpal, ext. 273.

P. S. The club is open to both single and married people.

(Continued from Page 1)

me at present that the top of the speed spectrum is wide open as far as aircraft is concerned. I think you will agree with me that we still have a few things to think about in the airplane line for a very long time to come, especially in the realm of manned aircraft for national defense."

sistible -- a sailing trip to the south seas! So, in August 1955, he resigned, and the Biolettis were headed for Honolulu. From there they sailed to Tahiti, where they spent two months, then to Samoa, the Tuamotus, and the Marquesas. From there they made their longest single ocean voyage -- 3500 miles -- back to San Diego. Returning to the San Francisco Bay area, Mr. Bioletti was offered a position at Ames and accepted in March 1956. Since then, he says, he hasn't done much travelling. Well, he has gone to Hawaii once and Mexico once, but nothing very extensive! The desire to travel is still there, but no concrete plans have been made, he says.

The Biolettis are both interested in archeology and have visited the ruins of many cities and civilizations. A native of Berkeley, Mr. Bioletti and his wife live in Los Altos. He is currently on the staff of the High Speed Research Division.

When asked how he manages to travel so extensively, Mr. Bioletti told us, "It's simple. We have no children!"



# THE MOFFETT FIELD EMPLOYEES CREDIT UNION NEEDS YOU

The Credit Union needs people who are interested in taking an active part in this organization. Not only do you learn the workings of a credit union, but also you have the opportunity to participate in social functions of the California Credit League.

If you are interested, please call at the office between 11:45-12:30 noon and 4:00 - 4:45 p.m. Navy Bldg. 69, phone Navy ext. 309.

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Reporters: NASA Employees

## WANT ADS

Wanted--Temporary ride from Willow Glen. Vicinity Washington Ave. between Pine and Minnesota. During month of July. Call Helen Edminster, ext. 308

Interested in organizing a ride group in vicinity of Park Blvd. & California Ave., in Palo Alto. 7:30 to 4:00 shift. Call P. Annis, ext. 214.

For Sale--King size bed, dresser and large wall mirror, Zenith portable radio, Remington Typewriter, table lamps, Yankee Clipper electric clock, Sunbeam mixmaster, complete hi-fi, and telephone stand. Call after 5:00, RE 9-0813.

For Sale--Club membership in the Moffett Aero Club (Luscombe 8F). Membership \$150, monthly dues \$5, hourly flying rate \$2.75. Call or see Dick Kurkowski, ext. 247.

For Sale--One membership in the Ames Flying Club. Cessna 120, hangared at San Jose Municipal Airport. Hourly flying rate \$3.60. Monthly dues \$5. Membership \$245. Contact Walt McNeill, Flight Research, ext. 206. Only Ames employees are eligible.

For Sale--Home in Mt. View. 3-bdrm, 2-bath, dishwasher, garbage disposal, w/w carpet. \$18,200. Phone YO 7-2939.

For Rent--Furnished cabin, Rio Del Mar. Call Vincent Pettine, ext. 272, or Essex 7-1311.

For Rent--Near Sears in San Jose (Burbank area), 1 bdrm apts, unfurn. Water & garbage paid. Adults. \$78.50 and up. Call ext. 381, or CY 4-6472, N. L. Zurich.

## Come To Ames Barbecue July 18!



Above are scenes from the Ames Barbecue of 1958, which featured such exciting moments as the dress designing contest (costumes were hastily created out of newspapers by the gals for their hubbies or beaus), a beauty contest, a delicious steak dinner, volley ball games, and all sorts of activities for young and old.

This year the Barbecue will again be held at the Blackberry Farm located on Byrne Road just off Stevens Creek Road opposite Monta Vista. Tickets will go on sale today in each branch. Children under 6 are admitted free, and lunches may be purchased for them from Ames booths at the Farm. Tickets for children 6 to 12 will be \$1, hot dog dinner included. For all those over 12, barbecued chicken dinner will be \$1.50, barbecued steak dinner \$2.25. The one price covers admission as well as dinner. Included with your steak or chicken will be barbecued beans, tossed green salad, French bread, coffee and ice cream. Other refreshments will be available in the refreshment booths. All those planning to attend are asked to bring their own silverware. Remember the date, Saturday, July 18.



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Recent Arrivals...



Pictured above are the newest members of the Ames staff, having come on board during the period June 4 to 18. Left to right (top row) are Quince Marion Hansen, Jr., of Snowflake, Arizona, a graduate of Brigham Young University, and assigned to Flight Instrument Research; Gary R. Marchant of Peoa, Utah, also a graduate of Brigham Young University, assigned to Wind Tunnel Instrument Research; Lloyd Gilger, another BYU graduate, assigned to Unitary Division; Ronald C. Kirkpatrick, a graduate of Texas A & M, assigned to Flight Instrument Research; Charles R. Nysmith of Des Moines, Iowa, a graduate of University of Kansas, assigned to the Hypervelocity Ballistic Range. (Second row) Theodore J. Pereira of Sunnyvale, assigned to Administrative Services; James D. Smith of Santa Clara, assigned to the Maintenance Branch; Jerry Reed of San Jose, assigned to the Instrument Research Division; John C. Arveson of Denver, Colorado, and Richard W. Silva of San Francisco, both assigned to the 10- by 14-. (Third row) Fred L. Bear of Tulsa, Oklahoma, assigned to the Fluid Mechanics Branch; Judith Shaffer of Grand Forks, North Dakota, assigned to Fluid Mechanics Branch; Lazaro F. Alvarez of Tampico, Mexico, assigned to Maintenance; Barbara Pederson of Seattle, Washington, assigned to Security; Willard Batey of Yakima, Washington, assigned to Photo. (Fourth row) James A. Brady of Gallup, New Mexico, a graduate of Texas A & M, assigned to the 40- by 80-; John R. Viegas of New Bedford, Mass., a graduate of Stanford University, assigned to Low Density and Heat Transfer Branch; Rudolph A. Gruber of Rock Springs, Wyoming, a graduate of University of Wyoming, assigned to Wind Tunnel Instrument Research; Vaughn D. Hopkins of Lincoln, Missouri, a graduate of Missouri School of Mines, assigned to Fluid Mechanics Branch; and John T. Caldwell of Mercedes, Texas, a graduate of Rice Institute, assigned to the 14-Foot.